



STIC Search Report

EIC 1700

STIC Database Tracking Number: 143643

TO: Samuel A Acquah
Location: REM 10D59
Art Unit : 1711
January 31, 2005

Case Serial Number: 10/783774

From: Kathleen Fuller
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
➤ Relevant prior art found, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art *not* found:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sam Acquah Examiner #: 65819 Date: 01/28/05
 Art Unit: 1711 Phone Number: 21065 Serial Number: 10783,774
 Mail Box and Bldg/Room Location: Room 1059 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract

Title of invention: Diamine compound polymer having condensed aromatic group
 Inventors (please provide full names): Mieko Seki; Daisuke Okuda; Tadayoshi Ozaki;
Takeshi Agata; Toru Ishii; Hiroyuki Moriyama; Kiyokazu Mashimoto; Katsuhiko Sato
 Earliest Priority Filing Date: 08/05/2003

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Method for making diamine compounds having formulas (I-1) or (I-2)
from monomers (VII-1) or (VIII-1)

STAFF USE ONLY

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher <u>K. Fuller</u>	NA Sequence (#) _____	STN <u>✓</u>	
Searcher Phone # _____	AA Sequence (#) _____	Dialog _____	
Searcher Location _____	Structure (#) <u>2</u>	Questel/Orbit _____	
Date Searcher Picked Up _____	Bibliographic _____	Dr. Link _____	
Date Completed <u>1/31/05</u>	Litigation _____	Lexis/Nexis _____	
Searcher Pre-Review Time <u>30</u>	Fulltext _____	Sequence Systems _____	
Clerical Prep. Time _____	Patent Family _____	WWW/Internet _____	
Case Time <u>45</u>	Other _____	Other (specify) _____	

=> file reg

FILE 'REGISTRY' ENTERED AT 16:40:01 ON 31 JAN 2005
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 30 JAN 2005 HIGHEST RN 823177-37-3
DICTIONARY FILE UPDATES: 30 JAN 2005 HIGHEST RN 823177-37-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> file hcaplu

FILE 'HCAPLUS' ENTERED AT 16:40:07 ON 31 JAN 2005
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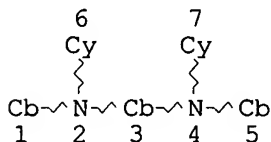
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FILE COVERS 1907 - 31 Jan 2005 VOL 142 ISS 6
FILE LAST UPDATED: 30 Jan 2005 (20050130/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d que 182

L73 STR



123 polymers from this
query
covering VII-1 VIII-1

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

GGCAT IS PCY UNS AT 3
 GGCAT IS UNS AT 6
 GGCAT IS UNS AT 7
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE
 L75 SCR 1842
 L77 SCR 2043
 L79 123 SEA FILE=REGISTRY SSS FUL L73 AND L75 AND L77
 L80 114 SEA FILE=REGISTRY ABB=ON L79 NOT 1-10/SI
 L81 40 SEA FILE=HCAPLUS ABB=ON L80
 L82 24 SEA FILE=HCAPLUS ABB=ON L81(L)PREP/RL

*24 CA reference
 on preparation
 of the polymers*

=> d 182 1-24 bib abs ind hitstr

L82 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:802399 HCAPLUS
 DN 141:322519
 TI Electrophotographic photoreceptor comprising mixtures of charge transfer compounds
 IN Sakimura, Tomoko; Shibata, Toyoko
 PA Konica Minolta Holdings, Inc., Japan
 SO U.S. Pat. Appl. Publ., 55 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004191654	A1	20040930	US 2004-805962	20040322
	JP 2004302032	A2	20041028	JP 2003-93896	20030331
	JP 2004302033	A2	20041028	JP 2003-93897	20030331
	JP 2004347855	A2	20041209	JP 2003-144707	20030522
PRAI	JP 2003-93896	A	20030331		
	JP 2003-93897	A	20030331		
	JP 2003-144707	A	20030522		
	JP 2003-304318	A	20030828		

OS MARPAT 141:322519

AB An electrophotog. photoreceptor comprising a support and a photosensitive layer is disclosed. The photosensitive layer contains a mixture of compds. represented by Formula (1): X-(CTM)_n-Y (CTM = charge transfer group; X, Y = H, halogen, mono-valent organic group; n = 0-10; provided that n = 1-10, when both X and Y are hydrogen atom or a halogen atom); and with condition of (Rp+Rs) ≤ 99%, Rp = ratio of a component having the maximum content in the mixture and Rs = ratio of a component having the content next to the maximum content in %. A processing cartridge comprising the electrophotog. photoreceptor is also disclosed. The object of the invention is to prevent the defects of the image caused by the decrease of the sensitivity, which tends to occur in the course of high speed copying or copying under a low temperature and low humidity condition, by the lowering of the sharpness of the image accompanying the decreasing of image d. and thinning of character image caused by the charge fluctuation of the solid black image area.

IC ICM G03G005-06

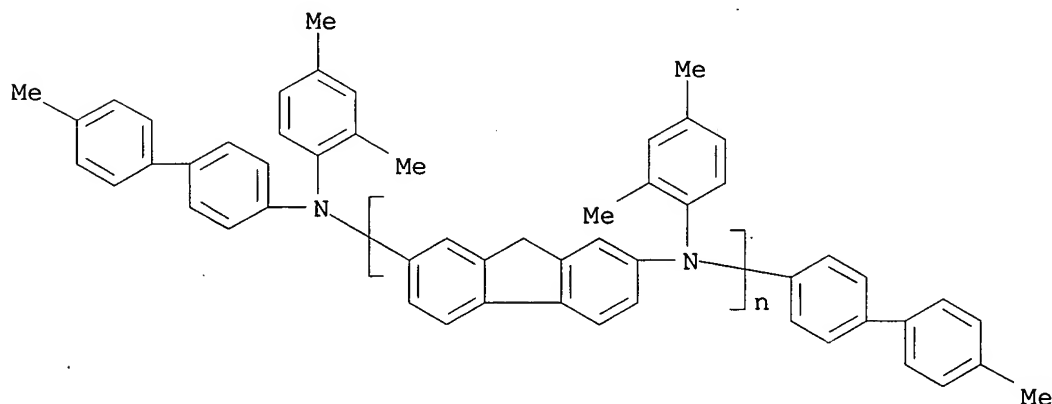
NCL 430058050; 430073000; 430058850

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST electrophotog photoreceptor charge transfer compd mixt

IT Electrophotographic photoconductors (photoreceptors)
(electrophotog. photoreceptor)IT **767336-03-8P**RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(electrophotog. photoreceptor)IT 313242-56-7DP, phenylalkenyl terminated 767335-98-8DP, diphenylalkenyl or diphenylaminephenylalkenyl derivative terminated 767335-99-9P
767336-00-5DP, diphenylaminephenylalkenyl derivative terminated 767336-02-7PRL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(electrophotog. photoreceptor comprising mixts. of charge transfer compds.)IT 767336-04-9 767336-05-0 767336-06-1 767336-07-2 767336-08-3
767336-09-4 767336-10-7 767336-11-8 767336-12-9 767336-13-0
767336-14-1 767336-15-2 767336-16-3 767336-17-4 767336-18-5
767336-19-6 767336-20-9 767336-21-0RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(electrophotog. photoreceptor comprising mixts. of charge transfer compds.)IT 27329-60-8DP, reaction products with polyamine polyphenylenevinylenes
58922-31-9DP, reaction products with polyamine polyphenylenevinylenes
110907-35-2DP, reaction products with polyamine polyphenylenevinylenes
208043-04-3DP, reaction products with polyamine polyphenylenevinylenes
767336-01-6PRL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(preparation of charge-transfer compound for electrophotog. photoreceptor)IT **767336-03-8P**RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(electrophotog. photoreceptor)

RN 767336-03-8 HCAPLUS

CN Poly[[(2,4-dimethylphenyl)imino]-9H-fluorene-2,7-diyl],
 α -(4'-methyl[1,1'-biphenyl]-4-yl)- ω -[(2,4-dimethylphenyl)(4'-methyl[1,1'-biphenyl]-4-yl)amino]- (9CI) (CA INDEX NAME)

L82 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:605927 HCAPLUS

DN 141:148055

TI Electrophotographic photoreceptor, electrophotographic device, and process cartridge

IN Sekiya, Michiyo; Uematsu, Hironori; Maruyama, Akio; Kikuchi, Norihiro; Daichi, Atsushi

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 108 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004212959	A2	20040729	JP 2003-393890	20031125
PRAI	JP 2002-365128	A	20021217		

AB Title photoreceptor comprises a conductive substrate and a photosensitive layer formed on the substrate. The photosensitive layer includes a charge-transporting layer formed from hole-transporting compds. which can be cured by electron beam radiation-induced polymerization The

hole-transporting

compds. contain >1 functional groups active to electron beam-induced polymerization and hole-transporting functional groups. The

charge-transporting

layer is formed by electron beam irradiation in an atmospheric having oxygen content

below 10000 ppm.

IC ICM G03G005-07

ICS G03G005-06

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST electrophotog photoreceptor hole transporting layer

IT Electrophotographic photoconductors (photoreceptors)

(electrophotog. photoreceptor having hole-transporting layer)

IT 268222-22-6P 268222-38-4P 268222-43-1P 269402-73-5P 344449-37-2P
344449-39-4P 344449-45-2P **344449-50-9P** 720665-62-3P

RL: DEV (Device component use); IMF (Industrial manufacture); **PREP**
(**Preparation**); USES (Uses)

(electrophotog. photoreceptor having hole-transporting layer)

IT **344449-50-9P**

RL: DEV (Device component use); IMF (Industrial manufacture); **PREP**
(**Preparation**); USES (Uses)

(electrophotog. photoreceptor having hole-transporting layer)

RN 344449-50-9 HCAPLUS

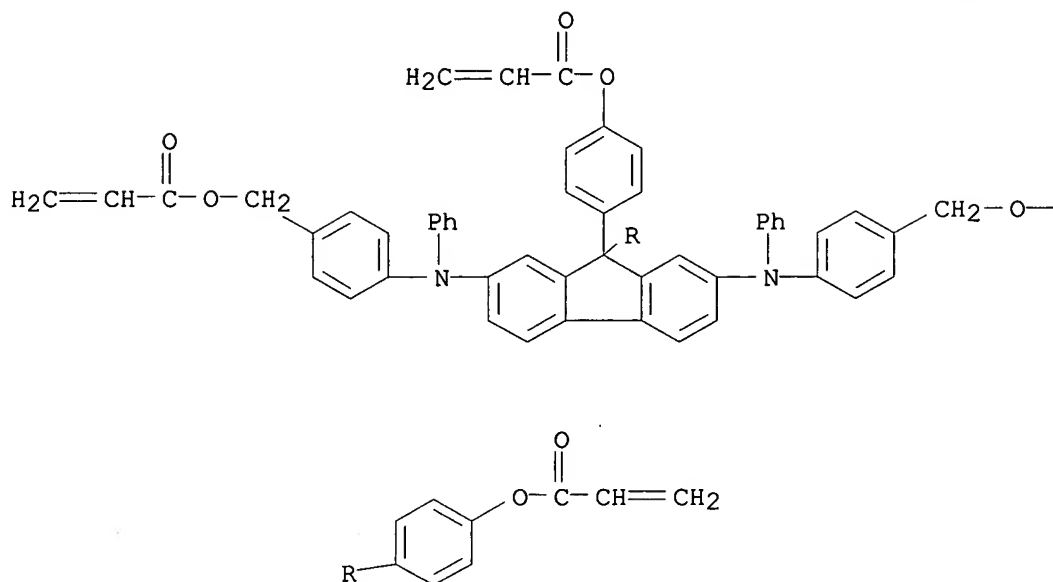
CN 2-Propenoic acid, [2,7-bis[[4-[[[(1-oxo-2-propenyl)oxy]methyl]phenyl]phenyl
amino]-9H-fluoren-9-ylidene]di-4,1-phenylene ester, homopolymer (9CI) (CA
INDEX NAME)

CM 1

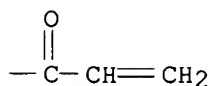
CRN 344449-49-6

CMF C63 H48 N2 O8

PAGE 1-A



PAGE 1-B



L82 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:601251 HCAPLUS
 DN 141:296377
 TI Synthesis of acrylate and norbornene polymers with pendant
 2,7-bis(diarylamino)fluorene hole-transport groups
 AU Hreha, Richard D.; Haldi, Andreas; Domercq, Benoit; Barlow, Stephen;
 Kippelen, Bernard; Marder, Seth R.
 CS Department of Chemistry, University of Arizona, Tucson, AZ, 85721, USA
 SO Tetrahedron (2004), 60(34), 7169-7176
 CODEN: TETRAB; ISSN: 0040-4020
 PB Elsevier B.V.
 DT Journal
 LA English
 AB New hole-transport monomers have been synthesized in which a
 2,7-(diarylamino)fluorene hole-transport functionality is linked through
 the 9-position of the fluorene bridge to a polymerizable acrylate or
 norbornene group; these monomers have been polymerized under free-radical and
 ring-opening metathesis polymerization (ROMP) conditions, resp. The norbornene
 monomer has also been copolymerized with a cinnamate-functionalized

norbornene; this copolymer can be rendered insol. through photo-crosslinking of the cinnamate groups under UV irradiation, thus permitting the use of the polymer in organic electronic devices based upon multiple polymer layers. The norbornene monomer has also been copolymerized with dicyclopentadiene to afford insol. crosslinked films. Time-of-flight studies indicate that the norbornene polymer has a higher hole mobility than the analogous acrylate material, consistent with the predictions of the disorder formalism.

- CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36
- ST acrylate norbornene polymer hole transport group
- IT Polymerization
Polymerization catalysts
(metathetic, ring-opening; synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT Electric transport properties
Hole (electron)
Hole mobility
Polymerization
Polymerization catalysts
(synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT Polyalkenamers
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 50626-34-1P 73872-42-1P 760989-29-5P 760989-34-2P 760989-39-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate in monomer preparation; synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 760989-43-3P 760989-48-8P 760989-50-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer; synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 74-88-4, Methyl iodide, reactions 79-41-4, Methacrylic acid, reactions 95-12-5, Bicyclo[2.2.1]hept-5-ene-2-methanol 98-59-9, p-Toluenesulfonyl chloride 627-18-9 1205-64-7, Phenyl-m-tolylamine 3943-97-3, Methyl 4-hydroxycinnamate 16433-88-8, 2,7-Dibromofluorene 18162-48-6, tert-Butyldimethylchlorosilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant in monomer preparation; synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 78-67-1, AIBN 172222-30-9 246047-72-3
RL: CAT (Catalyst use); USES (Uses)
(synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 760989-51-3P 760989-53-5P 760989-55-7P
760989-57-9P 761436-04-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of acrylate and norbornene polymers with pendant bis(diarylamino)fluorene hole-transport groups)
- IT 760989-51-3P 760989-53-5P 760989-55-7P
760989-57-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of acrylate and norbornene polymers with pendant

bis(diarylamino)fluorene hole-transport groups)

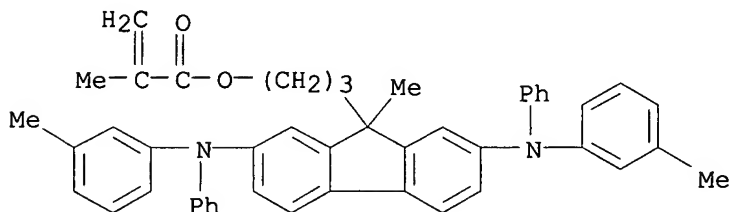
RN 760989-51-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[9-methyl-2,7-bis[(3-methylphenyl)phenylamino]-9H-fluoren-9-yl]propyl ester, homopolymer (9CI)
(CA INDEX NAME)

CM 1

CRN 760989-43-3

CMF C47 H44 N2 O2



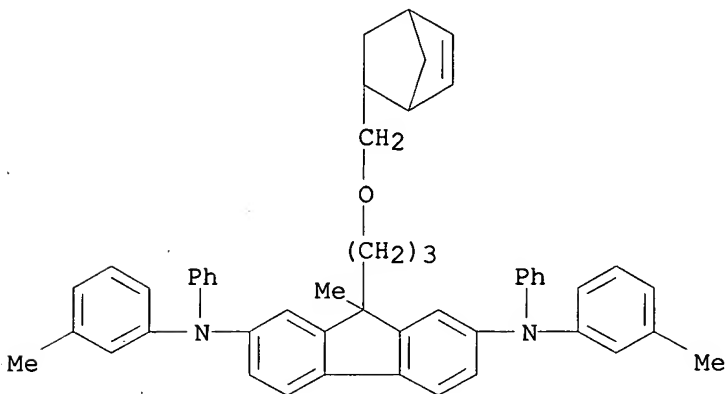
RN 760989-53-5 HCAPLUS

CN 9H-Fluorene-2,7-diamine, 9-[3-(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)propyl]-9-methyl-N,N'-bis(3-methylphenyl)-N,N'-diphenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 760989-48-8

CMF C51 H50 N2 O



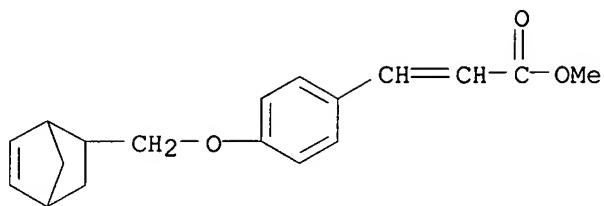
RN 760989-55-7 HCAPLUS

CN 2-Propenoic acid, 3-[4-(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)phenyl]-, methyl ester, polymer with 9-[3-(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)propyl]-9-methyl-N,N'-bis(3-methylphenyl)-N,N'-diphenyl-9H-fluorene-2,7-diamine (9CI) (CA INDEX NAME)

CM 1

CRN 760989-50-2

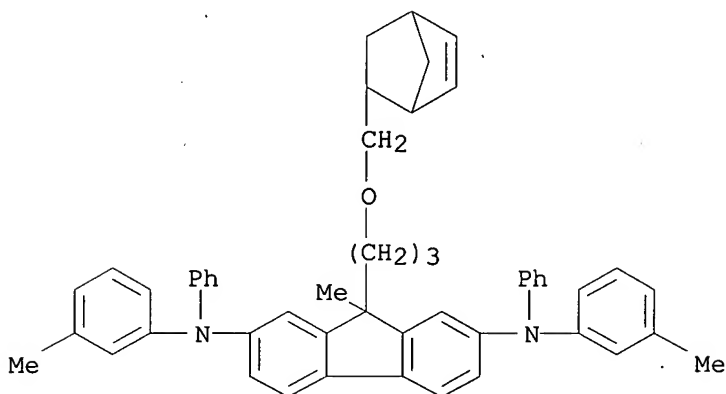
CMF C18 H20 O3



CM 2

CRN 760989-48-8

CMF C51 H50 N2 O



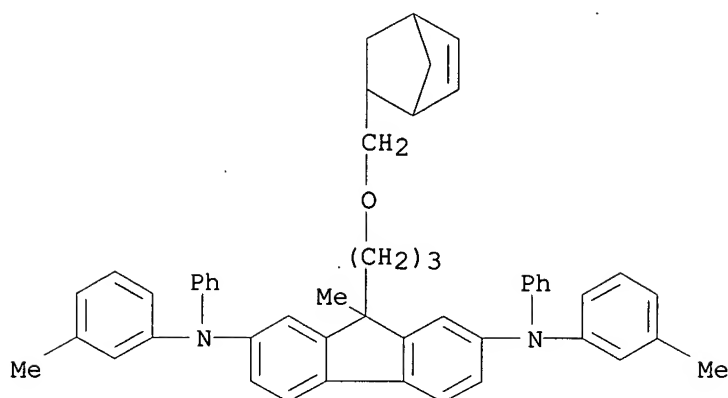
RN 760989-57-9 HCAPLUS

CN 9H-Fluorene-2,7-diamine, 9-[3-(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)propyl]-9-methyl-N,N'-bis(3-methylphenyl)-N,N'-diphenyl-, polymer with 2,4,7,7a-tetrahydro-4,7-methano-1H-indene (9CI) (CA INDEX NAME)

CM 1

CRN 760989-48-8

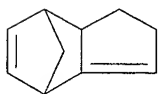
CMF C51 H50 N2 O



CM 2

CRN 78990-85-9

CMF C10 H12



RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82/ ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:569072 HCAPLUS

DN 141:114027

TI Electrophotographic photoreceptor, its manufacture, apparatus, and process cartridge

IN Maruyama, Akio; Uematsu, Hironori; Kikuchi, Norihiro; Amanomiya, Shoji; Sekiya, Michiyo; Tanaka, Hiroyuki; Daichi, Atsushi

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

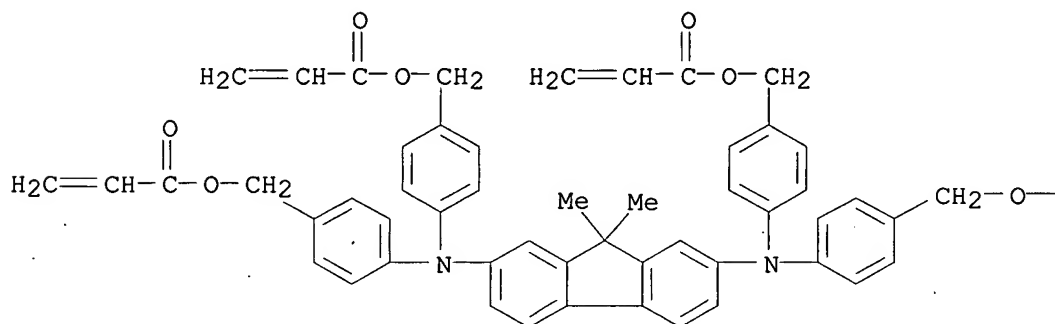
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004198568	A2	20040715	JP 2002-364670	20021217
PRAI	JP 2002-364670		20021217		

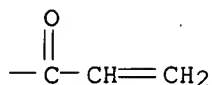
AB The photoreceptor has a photosensitive layer on an elec. conducting cylindrical support, of which surface layer is formed by irradiation of the layer containing a compound curable by polymerization or crosslinking when exposed to radiation. It is manufactured by rotating the cylindrical support at its axis on irradiation. The apparatus involves the obtained photoreceptor. The process cartridge removably incorporated in the apparatus, involves the obtained photoreceptor and ≥ 1 of charging, developing, and cleaning devices. The photoreceptor shows improved precipitation resistance, anti-cracking, and

abrasion resistance.
 IC ICM G03G005-147
 ICS G03G005-06; G03G005-07
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38
 ST electrophotog photoreceptor surface layer irradsn curable resin
 IT Electrophotographic photoconductors (photoreceptors)
 (electrophotog. photoreceptor with surface layer containing polymer cured by irradiation)
 IT Electron beams
 (irradiation; electrophotog. photoreceptor with surface layer containing polymer cured by irradiation)
 IT 36446-02-3P 268223-45-6P 344449-41-8P 395084-59-0P 720665-62-3P
 720712-39-0P 720712-41-4P **720712-43-6P**
 RL: DEV (Device component use); IMF (Industrial manufacture); **PREP**
(Preparation); USES (Uses)
 (electrophotog. photoreceptor with surface layer containing polymer cured by irradiation)
 IT **720712-43-6P**
 RL: DEV (Device component use); IMF (Industrial manufacture); **PREP**
(Preparation); USES (Uses)
 (electrophotog. photoreceptor with surface layer containing polymer cured by irradiation)
 RN 720712-43-6 HCAPLUS
 CN 2-Propenoic acid, (9,9-dimethyl-9H-fluorene-2,7-diyl)bis[nitrilobis(4,1-phenylenemethylene)] ester, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 720712-42-5
 CMF C55 H48 N2 O8

PAGE 1-A

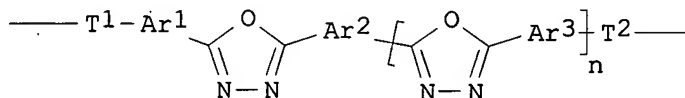


PAGE 1-B



L82 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:533724 HCAPLUS
 DN 141:90119
 TI Polyester resin, functional device and organic electroluminescent device using polyester resin, and method of manufacturing organic electroluminescent device
 IN Iwasaki, Masahiro; Nukada, Katsumi
 PA Fuji Xerox Co., Ltd, Japan
 SO U.S. Pat. Appl. Publ., 53 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2004126616	A1	20040701	US 2003-631716	20030801
	JP 2004196910	A2	20040715	JP 2002-365413	20021217
PRAI	JP 2002-365413	A	20021217		
GI					



I

AB A polyester resin is described comprising at least one repeating unit represented by the general formula I, wherein Ar1, Ar2, and Ar3 independently represent a (un)substituted arylene group, a (un)substituted bivalent heterocyclic group; T1 and T2 represent a linear or branched bivalent hydrocarbon group having 1 to 10 carbon atoms; and n = 0, or 1. An organic electroluminescent device is also described comprising a pair of electrodes composed of an anode and a cathode, at least one of which is transparent or translucent; and at least one organic compound layer that is sandwiched between the electrodes and contains at least one kind of the polyester resin. A method of fabricating the organic electroluminescent device is also described entailing forming at least one organic compound layer on a surface of an electrode; and forming a counter electrode on a surface of the at least one organic compound layer, wherein at least one kind of the polyester resin is used to form at least one layer of the at least one organic compound layer in the step of forming the at least one organic compound layer.

IC ICM H05B033-12
 ICS C09K011-06; C08G063-685

NCL 428690000; 428917000; 313504000; 313506000; 427066000; 257040000;
528272000; 528423000

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 76

ST polyester resin functional device org electroluminescent device

IT Electroluminescent devices
Semiconductor device fabrication
(polyester resin, functional device and organic electroluminescent device
using polyester resin as electron transporting layer)

IT Polyesters, uses
RL: DEV (Device component use); USES (Uses)
(polyester resin, functional device and organic electroluminescent device
using polyester resin as electron transporting layer)

IT 50926-11-9, Indium tin oxide
RL: DEV (Device component use); USES (Uses)
(electrode; polyester resin, functional device and organic
electroluminescent device using polyester resin as electron
transporting layer)

IT 25067-59-8, Polyvinylcarbazole
RL: DEV (Device component use); USES (Uses)
(electron transporting layer; polyester resin, functional device and
organic electroluminescent device using polyester resin as electron
transporting layer)

IT 171103-85-8P 714966-18-4P 714966-19-5P **714966-22-0P**
714966-24-2P 714966-26-4P 714966-27-5P 714966-28-6P 714966-30-0P
714966-31-1P 714966-32-2P 714966-33-3P
RL: DEV (Device component use); SPN (Synthetic preparation); **PREP**
(Preparation); USES (Uses)
(electron transporting layer; polyester resin, functional device and
organic electroluminescent device using polyester resin as electron
transporting layer)

IT 123847-85-8, α -NPD
RL: DEV (Device component use); USES (Uses)
(hole transporting material; polyester resin, functional device and
organic electroluminescent device using polyester resin as electron
transporting layer)

IT 2085-33-8, Alq3
RL: DEV (Device component use); USES (Uses)
(light emitting material; polyester resin, functional device and organic
electroluminescent device using polyester resin as electron
transporting layer)

IT **714966-22-0P 714966-31-1P**
RL: DEV (Device component use); SPN (Synthetic preparation); **PREP**
(Preparation); USES (Uses)
(electron transporting layer; polyester resin, functional device and
organic electroluminescent device using polyester resin as electron
transporting layer)

RN 714966-22-0 HCAPLUS

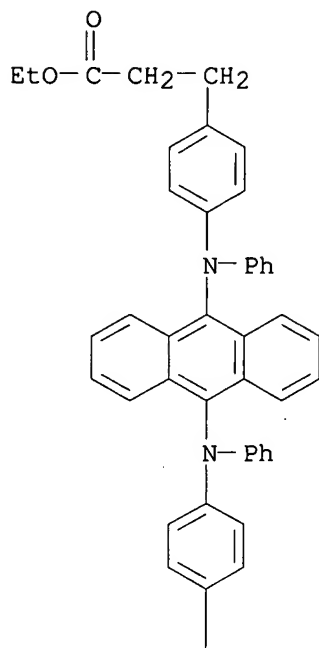
CN Benzenepropanoic acid, 4,4'-[9,10-anthracenediylbis(phenylimino)]bis-,
diethyl ester, polymer with dimethyl 4,4'-(1,3,4-oxadiazole-2,5-
diyl)bis[benzenepropanoate] (9CI) (CA INDEX NAME)

CM 1

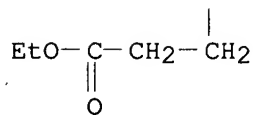
CRN 714966-21-9

CMF C48 H44 N2 O4

PAGE 1-A



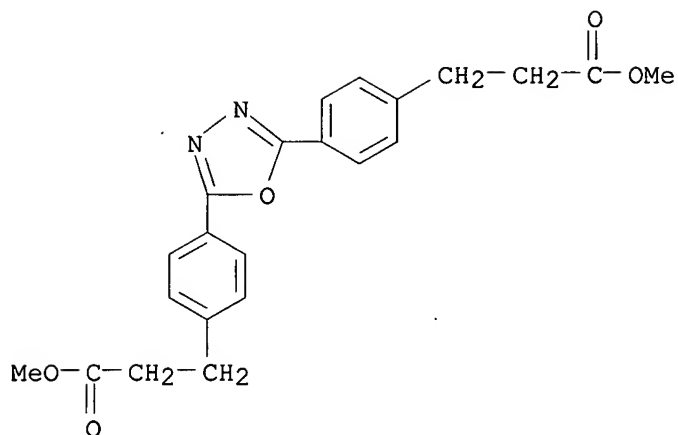
PAGE 2-A



CM 2

CRN 714966-20-8

CMF C22 H22 N2 O5

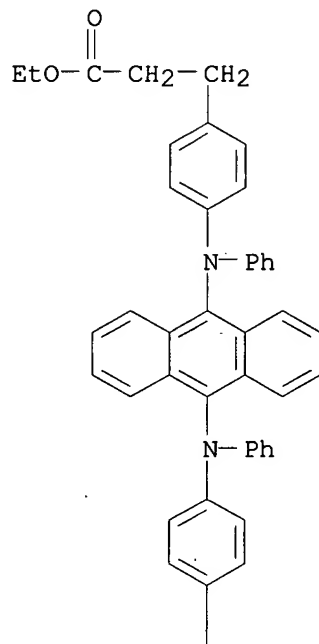


RN 714966-31-1 HCAPLUS
 CN Benzenepropanoic acid, 4,4'-[9,10-anthracenediylbis(phenylimino)]bis-,
 diethyl ester, homopolymer (9CI) (CA INDEX NAME)

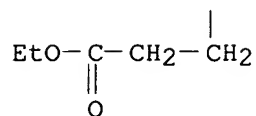
CM 1

CRN 714966-21-9
 CMF C48 H44 N2 O4

PAGE 1-A



PAGE 2-A



L82 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:495621 HCAPLUS

DN 141:61845

TI Organic electroluminescence device

IN Seki, Mieko; Yoneyama, Hiroto; Okuda, Daisuke; Hirose, Eiichi; Ozaki, Tadayoshi; Agata, Takeshi; Ishii, Toru; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 116 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004171858	A2	20040617	JP 2002-334871	20021119
PRAI	JP 2002-334871		20021119		

AB The invention relates to an organic electroluminescent device comprising the charge transporting polyester having the partial structure represented by - (T)l(O)n-C6H4N(Ar)X[N(Ar)C6H4]k(O)n(T)l- and -(T)l(O)n-C6H4C6H4N(Ar)X[N(Ar)C6H4C6H4]k(O)n(T)l- [Ar = Ph, 2-10 ring polynuclear aromatic, 2-10 ring condensed aromatic, etc.; X = divalent aromatic group derived

from anthracene, tetracene, pyrene, etc.; k n l = 0 and 1; T = C1-6 normal chain hydrocarbons and C2-10 branched hydrocarbons].

IC ICM H05B033-14

ICS C08G063-68; H05B033-22; C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 35

ST org electroluminescence device charge transporting polyester

IT Electroluminescent devices

(charge transporting polyester for organic electroluminescence device)

IT Polyesters, uses

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(charge transporting polyester for organic electroluminescence device)

IT 705274-71-1P 705274-74-4P 705274-77-7P 705274-80-2P

705274-82-4P 705274-85-7P 705274-87-9P 705275-35-0P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(charge transporting polyester for organic electroluminescence device)

IT 705274-71-1P 705274-74-4P 705274-82-4P

705275-35-0P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(charge transporting polyester for organic electroluminescence device)

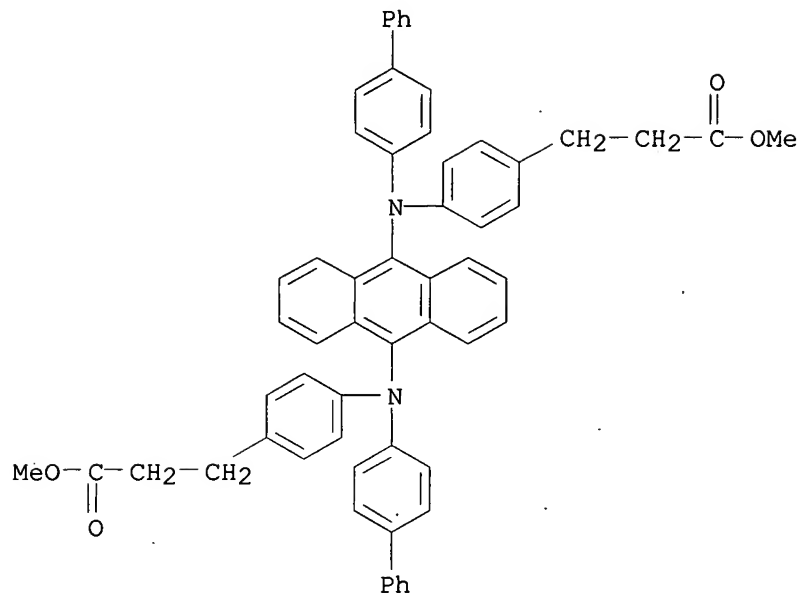
RN 705274-71-1 HCAPLUS

CN Benzenepropanoic acid, 4,4'-[9,10-anthracenediylbis([1,1'-biphenyl]-4-ylimino)]bis-, dimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

CRN 705274-70-0

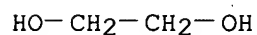
CMF C58 H48 N2 O4



CM 2

CRN 107-21-1

CMF C2 H6 O2



RN 705274-74-4 HCAPLUS

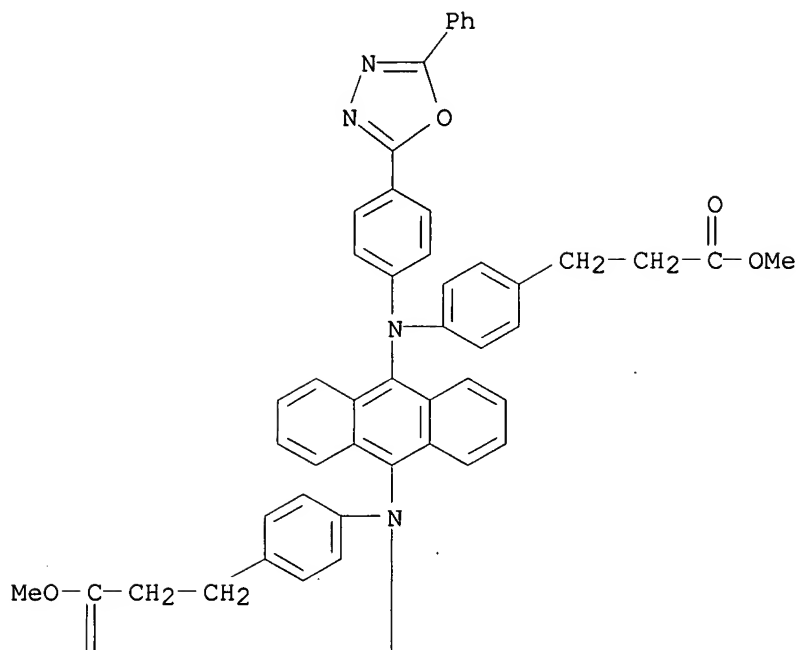
CN Benzenepropanoic acid, 4,4'-[9,10-anthracenediylbis[[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]imino]]bis-, dimethyl ester, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

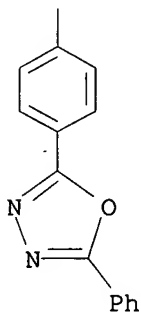
CRN 705274-73-3

CMF C62 H48 N6 O6

PAGE 1-A



PAGE 2-A



CM 2

CRN 107-21-1
CMF C2 H6 O2

HO-CH₂-CH₂-OH

RN 705274-82-4 HCAPLUS
CN Poly[oxy-1,2-ethanediyl]oxy(1-oxo-1,3-propanediyl)-1,4-phenylene[[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]imino]-9,10-anthracenediyl[[4-(5-phenyl-1,3,4-oxadiazol-2-yl)phenyl]imino]-1,4-phenylene(3-oxo-1,3-propanediyl)]

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

(9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

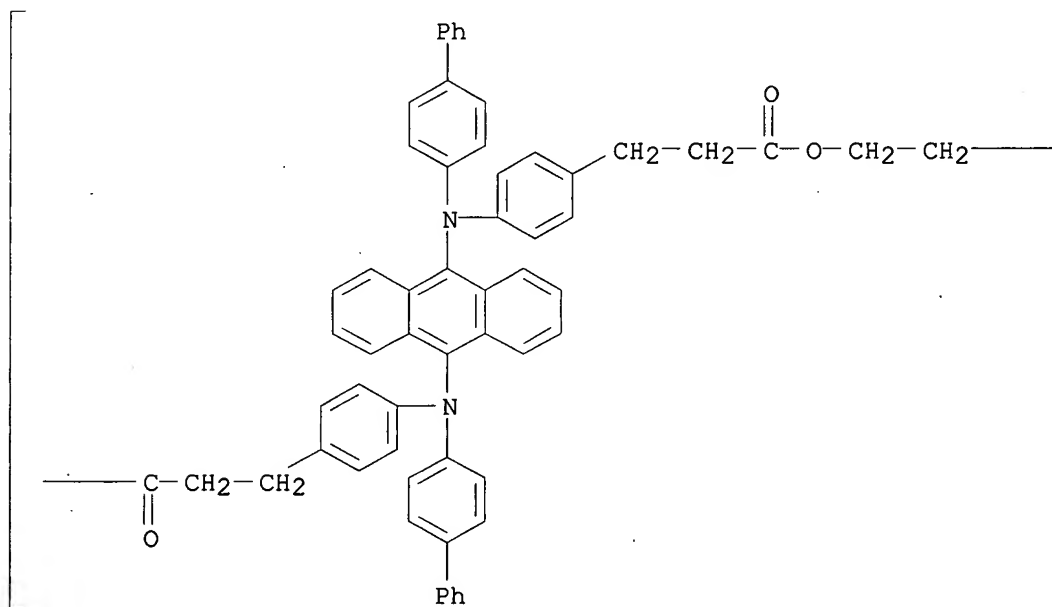
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 705275-35-0 HCAPLUS

CN Poly[oxy-1,2-ethanediyl-oxy(1-oxo-1,3-propanediyl)-1,4-phenylene([1,1'-biphenyl]-4-ylimino)-9,10-anthracenediyl([1,1'-biphenyl]-4-ylimino)-1,4-phenylene(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



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L82 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:474336 HCAPLUS

DN 141:334740

TI Interface engineering for solid-state dye-sensitized nanocrystalline solar cells: The use of ion-solvating hole-transporting polymers

AU Haque, Saif A.; Park, Taiho; Xu, Cigang; Kooops, Sara; Schulte, Niels; Potter, Robert J.; Holmes, Andrew B.; Durrant, James R.

CS Centre for Electronic Materials and Devices, Department of Chemistry, Imperial College of Science Technology and Medicine, London, SW7 2AZ, UK

SO Advanced Functional Materials (2004), 14(5), 435-440

CODEN: AFMDC6; ISSN: 1616-301X

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

AB The control of interfacial charge transfer is central to the design of photovoltaic devices. This charge transfer is strongly dependent upon the local chemical environment at each interface. The authors report a methodol. for the fabrication of a novel nanostructured multicomponent film, employing a dual-function supramol. organic semiconductor to allow mol.-level control of the local chemical composition at a nanostructured inorg./organic semiconductor heterojunction. The multicomponent film comprises a lithium ion doped dual-functional hole-transporting material (Li+-DFHTM), sandwiched between a dye-sensitized nanocryst. TiO₂ film and a mono-functional organic hole-transporting material (MFHTM). The DFHTM consists of a conjugated organic semiconductor with ion supporting side chains, designed to allow both electronic and ionic charge transport properties. The Li+-DFHTM layers provide a new and versatile way to control the interface electrostatics, and consequently the charge transfer, at a nanostructured dye-sensitized inorg./organic semiconductor heterojunction.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 35, 38, 76

ST dye sensitized nanocryst heterojunction solar cell ion solvation polymer;
hole transport dual functional polymer titania lithium complex

IT Polyamines
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(aromatic, fluorene- containing; use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT Electric current-potential relationship
(of assembled solar cells; use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT Electron transfer
Heterojunction solar cells
Hole transport
Nanocrystalline materials
Semiconductor heterojunctions
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT Glass, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 1332-29-2, Tin oxide
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(F-doped; use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 207739-72-8
RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(OMeTAD; use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 7782-41-4, Fluorine, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(SnO2 doped with; use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 77-98-5, Tetraethylammonium hydroxide 14221-01-3, Tetrakis(triphenylphosphine)palladium
RL: CAT (Catalyst use); USES (Uses)
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 7439-93-2, Lithium, uses 141460-19-7, N 3 Dye 155812-81-0, Lithium trifluoromethanesulfonamide
RL: DEV (Device component use); USES (Uses)
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 1317-70-0, Anatase
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 771563-21-4P 771563-22-5DP, lithium complexes
RL: DEV (Device component use); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 771563-19-0P 771563-20-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

IT 771563-21-4P 771563-22-5DP, lithium complexes
 RL: DEV (Device component use); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); **PREP (Preparation)**; USES (Uses)

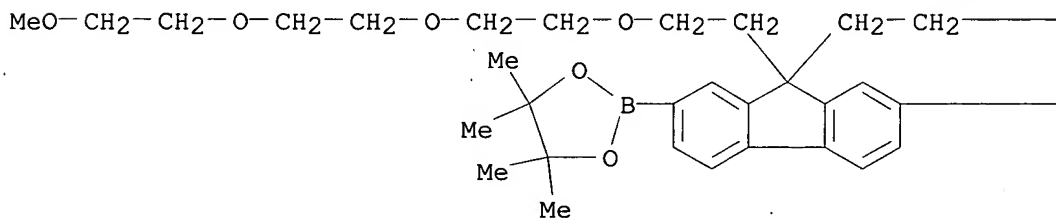
(use of ion-solvating hole-transporting polymers of interface engineering for solid-state dye-sensitized nanocryst. solar cells:)

RN 771563-21-4 HCAPLUS
 CN 9H-Fluorene-2,7-diamine, N,N'-bis(4-bromophenyl)-N,N'-bis(4-methoxyphenyl)-9,9-dioctyl-, polymer with 2,2'-[9,9-bis(3,6,9,12-tetraoxatridec-1-yl)-9H-fluorene-2,7-diyl]bis[4,4,5,5-tetramethyl-1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

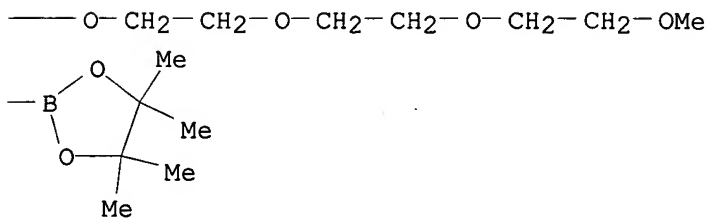
CM 1

CRN 771563-20-3
 CMF C43 H68 B2 O12

PAGE 1-A

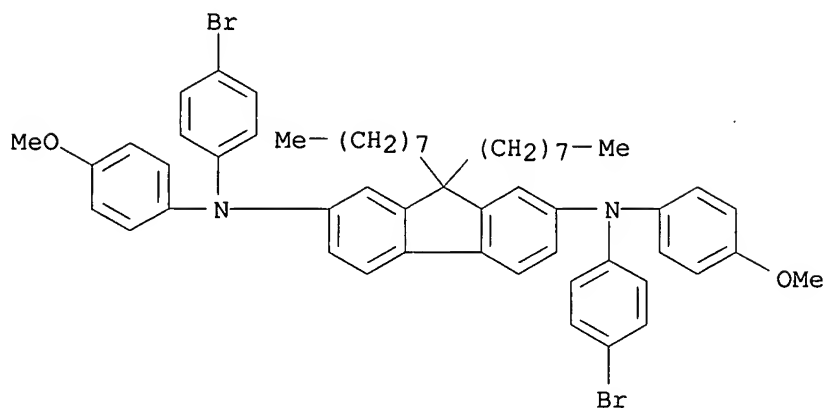


PAGE 1-B



CM 2

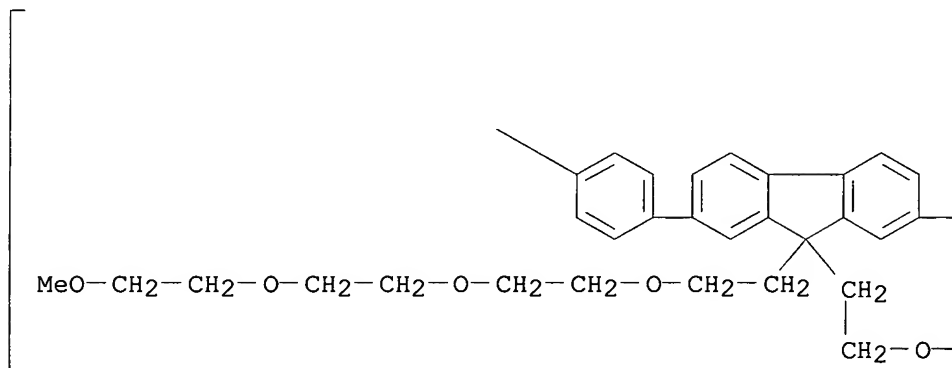
CRN 771563-19-0
 CMF C55 H62 Br2 N2 O2



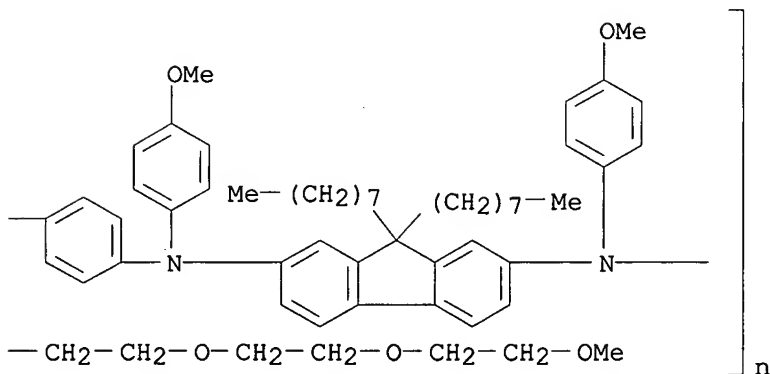
RN 771563-22-5 HCAPLUS

CN Poly[[(4-methoxyphenyl)imino] (9,9-dioctyl-9H-fluorene-2,7-diyl) [(4-methoxyphenyl)imino]-1,4-phenylene[9,9-bis(3,6,9,12-tetraoxatridec-1-yl)-9H-fluorene-2,7-diyl]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



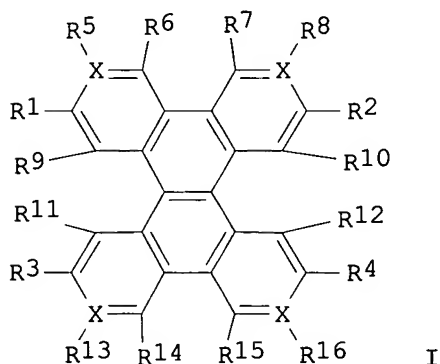
PAGE 1-B



RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:451525 HCAPLUS
DN 141:30834
TI Organic light-emitting device based on crosslinkable spiro-type conjugated compounds
IN Li, Xiao-Chang Charles
PA Canon Kabushiki Kaisha, Japan
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004106004	A1	20040603	US 2002-308099	20021203
	US 6830833	B2	20041214		
	JP 2004182737	A2	20040702	JP 2003-403748	20031202
PRAI	US 2002-308099	A	20021203		
OS	MARPAT 141:30834				
GI					



AB The title spiro-type conjugated compds. represented by general formula I
(X = C, N; R1-16 = H, D, alkyl, alkoxy, silyl, aromatic ring, fused aromatic ring, heteroarom. ring, fused heteroarom. ring, diarylamino, carbazole; at least one of R1-16 is crosslinkable group consisting of vinyl double bond or azide group) are useful in the fabrication of organic light emitting devices.

IC ICM H05B033-14
ICS C09K011-06

NCL 428690000; 428917000; 313504000; 313506000; 546041000; 564426000; 564429000; 556431000; 556432000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 24, 27, 28, 74

ST spiro conjugated compd crosslinkable polymer org light emitting device;
org electroluminescent display OLED crosslinkable spiro conjugated polymer

IT Electroluminescent devices
(displays; organic light-emitting device based on crosslinkable spiro-type

conjugated compds.)

IT Luminescent screens
Luminescent substances
(electroluminescent; organic light-emitting device based on crosslinkable spiro-type conjugated compds.)

IT **697763-40-9P**
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(crosslinked spiro-type conjugated compds. as hole transport materials for organic light-emitting device)

IT 697763-42-1P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(crosslinked spiro-type conjugated compds. as light emitting materials for organic light-emitting device)

IT 697763-39-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of crosslinkable spiro-type conjugated compds. as hole transport materials for organic light-emitting device)

IT 486-25-9, Fluorenone 7726-95-6, Bromine, reactions 697763-38-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of crosslinkable spiro-type conjugated compds. as hole transport materials for organic light-emitting device)

IT 191-68-4P, Dibenzo[g,p]chrysene 3073-51-6P, [9,9'-Bi-9H-fluorene]-9,9'-diol 101955-77-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of crosslinkable spiro-type conjugated compds. as hole transport materials for organic light-emitting device)

IT 1719-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of crosslinkable spiro-type conjugated compds. as light emitting materials for organic light-emitting device)

IT 697763-41-0P
RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of crosslinkable spiro-type conjugated compds. as light emitting materials for organic light-emitting device)

IT **697763-40-9P**
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(crosslinked spiro-type conjugated compds. as hole transport materials for organic light-emitting device)

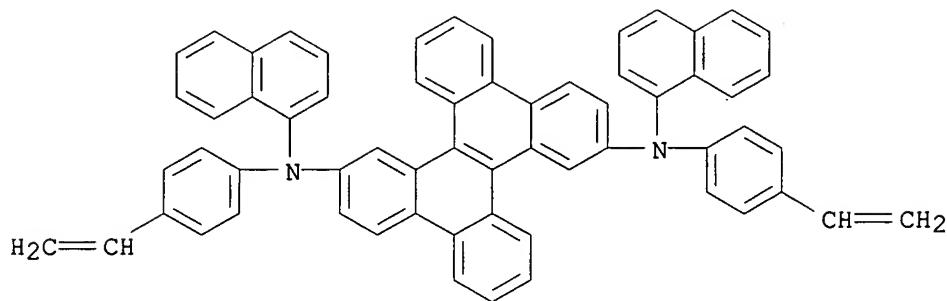
RN 697763-40-9 HCAPLUS

CN Dibenzo[g,p]chrysene-2,10-diamine, N,N'-bis(4-ethenylphenyl)-N,N'-di-1-naphthalenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 697763-39-6

CMF C62 H42 N2



L82 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:363751 HCAPLUS

DN 141:95877

TI Linear and Two-Photon Photophysical Properties of a Series of Symmetrical Diphenylaminofluorenes

AU Belfield, Kevin D.; Morales, Alma R.; Hales, Joel M.; Hagan, David J.; Van Stryland, Eric W.; Chapela, Victor M.; Percino, Judith

CS Department of Chemistry and School of Optics/CREOL/FPCE, University of Central Florida, Orlando, FL, 32816, USA

SO Chemistry of Materials (2004), 16(11), 2267-2273

CODEN: CMATEX; ISSN: 0897-4756

PB American Chemical Society

DT Journal

LA English

AB A series of linear, sym., diphenylaminofluorene-based materials are reported. The series investigated was model 9,9-didecyl-2,7-bis(N,N-diphenylamino)fluorene (1), oligomer 9,9-didecyl-N,N-bis(9,9-didecyl-7-N,N-diphenylaminofluorene-2-yl)-N,N-diphenyl-fluorene-2,7-diamine (2), and poly(9,9-didecyl-2,7-diphenylaminofluorene) (3). Structural characterization and photophys. properties, including linear absorption, quantum yields, single photon fluorescence, and two-photon absorption (2PA) spectra, were studied in polar and nonpolar solvents. 2PA spectra were determined by two independent methods: a nonlinear transmission method employing a femtosecond white-light continuum (WLC) and a two-photon fluorescence (2PF) method. Polymer 3, a low-mol.-weight polymer with fourteen fluorene units, exhibited a very large two-photon absorption cross-section of $17\,200$ and $6800 \pm 10\text{--}50\text{ cm}^4\text{ s photon}^{-1}\text{ mol}^{-1}$ as estimated from the WLC and 2PF methods, resp.

CC 73-2 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 36, 74

ST decyldiphenylaminofluorenone polymer linear nonlinear optical property; photophys polydidecyldiphenylaminofluorenone two photon absorption

IT UV and visible spectra

(absorption; linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

IT Absorption spectra

Fluorescence

Luminescence

Nonlinear optical properties

Optical properties

Solvent polarity effect

Thermal stability

Two-photon absorption

(linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

IT Ullmann reaction
(synthesis of poly(didecyldiphenylaminofluorene))

IT 249296-20-6, 9,9-Didecyl-2,7-diiodofluorene
RL: RCT (Reactant); RACT (Reactant or reagent)
(Ullmann condensation with didecyl-bis(N-phenylamino)fluorene)

IT 434334-63-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(Ullmann condensation with didecyldiiodofluorene)

IT 713514-10-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

IT 289892-10-0, 9,9-Didecyl-2,7-bis(N,N-diphenylamino)fluorene 434334-64-2
RL: PRP (Properties)
(model compound; linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

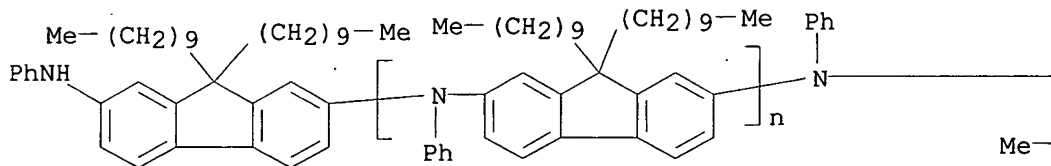
IT 108-94-1, Cyclohexanone, properties 110-54-3, Hexane, properties
RL: PRP (Properties)
(solvent effect; linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

IT 713514-10-4P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(linear and nonlinear optical properties of poly(didecyldiphenylaminofluorenone) and its model compds.)

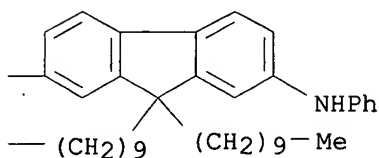
RN 713514-10-4 HCAPLUS

CN Poly[(phenylimino)(9,9-didecyl-9H-fluorene-2,7-diyl)],
 α -[9,9-didecyl-7-(phenylamino)-9H-fluorene-2-yl]- ω -[[9,9-didecyl-7-(phenylamino)-9H-fluorene-2-yl]phenylamino]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

AN 2004:310196 HCAPLUS
 DN 140:347168
 TI Electroluminescent polyamines for organic electroluminescent devices
 IN Tamano, Michiko; Shigehiro, Harunori; Kurata, Ryuichiro
 PA Toyo Ink Mfg. Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 30 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004115761	A2	20040415	JP 2002-285135	20020930
PRAI	JP 2002-285135		20020930		

AB The electroluminescent polyamines are expressed by $RaA(BA)nRb$ [A = $R1N(R2)XN(R3)R4$; B = nonarom. 2-20-membered ring which may contain O, S, Se, or N; Ra, Rb = H, (substituted) alkyl; n = 1-5000; R1, R4 = monovalent (substituted) Ph; R2, R3 = divalent (substituted) phenylene; substituent at R1-4 may form a (substituted) ring with adjacent substituent; X = divalent aromatic ring residue, or divalent group expressed by $-Ar-Z-Ar-$; Ar = C6-20 aromatic ring residue; Z = direct bonding, O, S, Se, divalent aromatic ring residue which may contain these hetero atoms, divalent aliphatic group residue which may contain these hetero atoms]. The substances may be mixed with conjugated polymers to emit white light. The substances durably emit high-luminance light.

IC ICM C09K011-06

ICS C07C211-54; C07C211-61; C08G061-12; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

ST org electroluminescent device white emission polyamine

IT Polyamines

RL: DEV (Device component use); USES (Uses)

(cardo; polyamine electroluminescent substances for organic electroluminescent devices)

IT Luminescent substances

(electroluminescent; polyamine electroluminescent substances for organic electroluminescent devices)

IT Electroluminescent devices

(organic; polyamine electroluminescent substances for organic electroluminescent devices)

IT Cardo polymers

RL: DEV (Device component use); USES (Uses)

(polyamine-; polyamine electroluminescent substances for organic electroluminescent devices)

IT 681010-68-4 681010-69-5 681010-70-8 681010-71-9 681010-72-0

681010-74-2 681010-76-4 681010-79-7

RL: DEV (Device component use); USES (Uses)

(polyamine electroluminescent substances for organic electroluminescent devices)

IT 680617-51-0P 680617-52-1P 680617-53-2P 681010-65-1P

681010-66-2P 681010-67-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP

(Preparation); USES (Uses)

(polyamine electroluminescent substances for organic electroluminescent devices)

IT 680617-52-1P 680617-53-2P 681010-66-2P

681010-67-3P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP

(Preparation); USES (Uses)

(polyamine electroluminescent substances for organic electroluminescent devices)

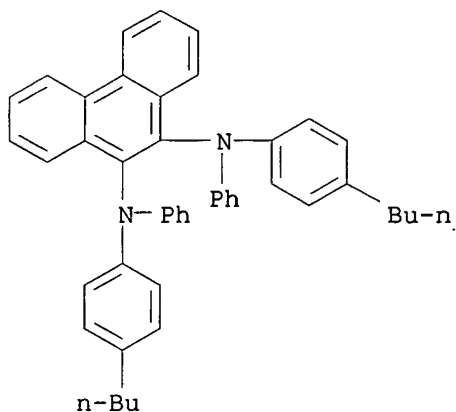
RN 680617-52-1 HCAPLUS

CN Cyclohexanone, 4-methyl-, polymer with N,N'-bis(4-butylphenyl)-N,N'-diphenyl-9,10-phenanthrenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 176443-22-4

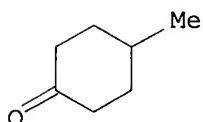
CMF C46 H44 N2



CM 2

CRN 589-92-4

CMF C7 H12 O



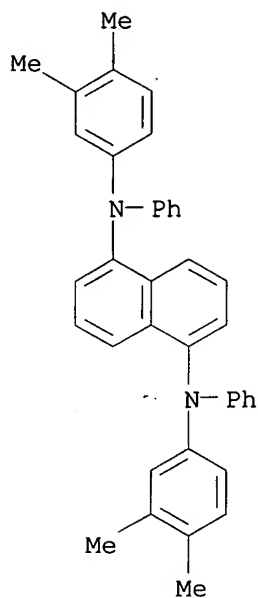
RN 680617-53-2 HCAPLUS

CN Cyclohexanone, 4-methyl-, polymer with N,N'-bis(3,4-dimethylphenyl)-N,N'-diphenyl-1,5-naphthalenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 176443-23-5

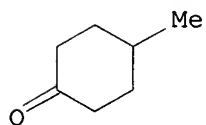
CMF C38 H34 N2



CM 2

CRN 589-92-4

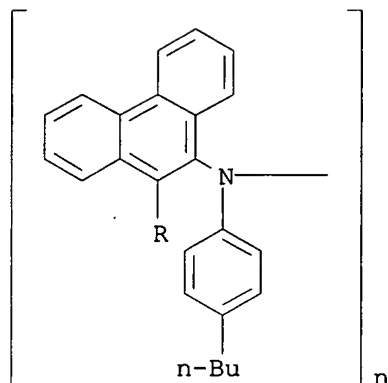
CMF C7 H12 O



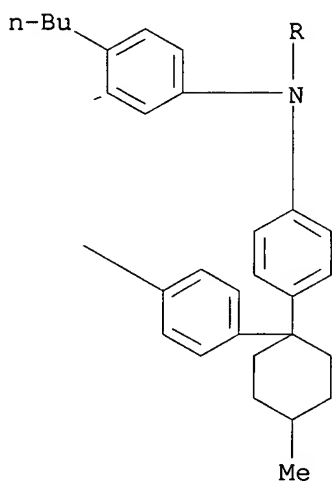
RN 681010-66-2 HCAPLUS

CN Poly[[[(4-butylphenyl)imino]-9,10-phenanthrenediyl[(4-butylphenyl)imino]-1,4-phenylene(4-methylcyclohexylidene)-1,4-phenylene] (9CI) (CA INDEX NAME)

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RN 681010-67-3 HCAPLUS
 CN Poly[[(3,4-dimethylphenyl)imino]-1,5-naphthalenediyl[(3,4-dimethylphenyl)imino]-1,4-phenylene(4-methylcyclohexylidene)-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

L82 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:291697 HCAPLUS
 DN 140:329313

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Organic electroluminescent device
 IN Okuda, Daisuke; Sato, Katsuhiko; Mashimo, Kiyokazu; Agata, Takeshi; Ishii, Toru; Ozaki, Tadayoshi; Hirose, Eiichi; Yoneyama, Hiroto; Seki, Mieko
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 57 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

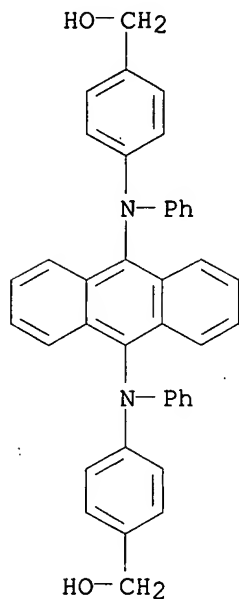
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2004111133	A2	20040408	JP 2002-269792	20020917
PRAI	JP 2002-269792		20020917		
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The devices comprises charge-transporting polyurethanes having structural repeating units containing moiety structure of I or II [Ar = (un)substituted Ph, (un)substituted monovalent (polynuclear) aromatic hydrocarbyl, etc.; X = divalent condensed polycyclic aromatic hydrocarbylene having 3-10 atom. rings; k = 0, 1]. The devices, capable of being large-sized, provide high luminance and long service life.
 IC ICM H05B033-14
 ICS C08G018-38; C09K011-06; H05B033-22
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 38
 ST org electroluminescent device charge transport arom polyamine polyurethane
 IT Polyurethanes, uses
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (polyamine-; organic electroluminescent device comprising polyamine polyurethane charge-transport agent)
 IT Polyamines
 RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
 (polyurethane-; organic electroluminescent device comprising polyamine polyurethane charge-transport agent)
 IT **676593-11-6P** 676593-13-8P 676593-15-0P **676593-16-1P**
 676593-17-2P 676593-18-3P
 RL: DEV (Device component use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
 (organic electroluminescent device comprising polyamine polyurethane charge-transport agent)
 IT **676593-11-6P 676593-16-1P**
 RL: DEV (Device component use); IMF (Industrial manufacture); **PREP (Preparation)**; USES (Uses)
 (organic electroluminescent device comprising polyamine polyurethane charge-transport agent)
 RN 676593-11-6 HCAPLUS
 CN Benzenemethanol, 4,4'-[9,10-anthracenediylbis(phenylimino)]bis-, polymer with 1,6-diisocyanatohexane (9CI) (CA INDEX NAME)

CM 1

CRN 676593-10-5
CMF C40 H32 N2 O2



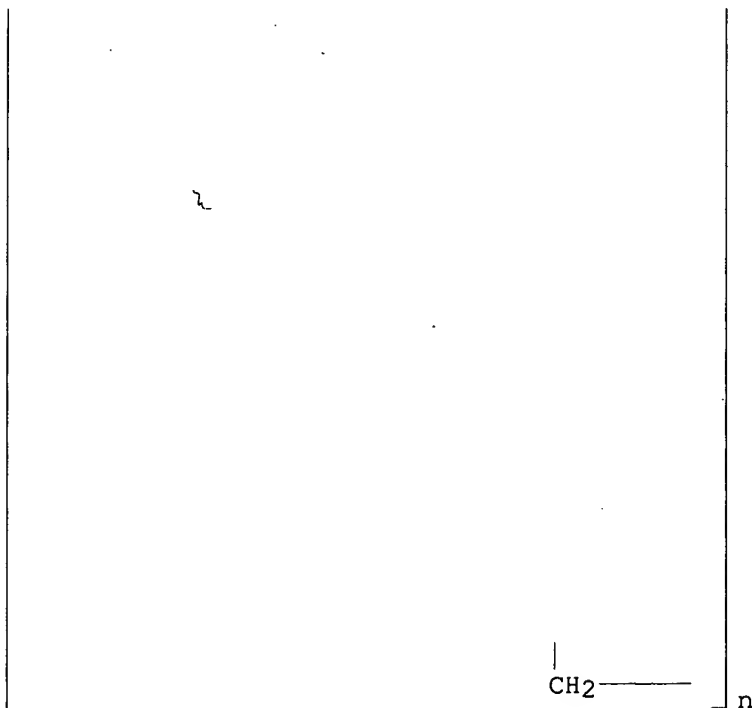
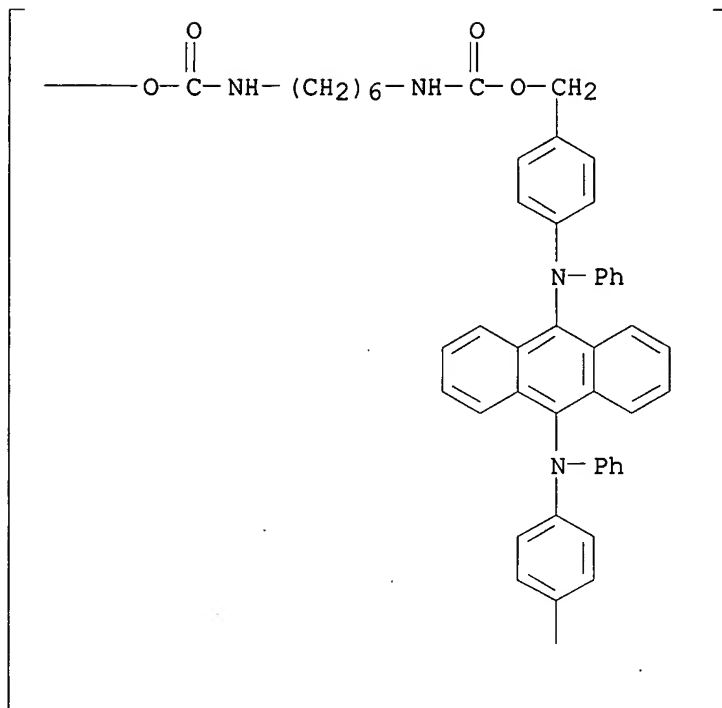
CM 2

CRN 822-06-0
CMF C8 H12 N2 O2

OCN- (CH₂)₆-NCO

RN 676593-16-1 HCAPLUS
CN Poly[oxy carbonylimino-1,6-hexanediyliminocarbonyloxymethylene-1,4-phenylene(phenylimino)-9,10-anthracenediyl(phenylimino)-1,4-phenylenemethylene] (9CI) (CA INDEX NAME)

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L82 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2004:143208 HCAPLUS
 DN 140:182404
 TI Novel triarylamine polymers and their preparation method and uses
 IN Suzuki, Takao; Nishiyama, Masakazu; Eguchi, Hisao
 PA Tosoh Corporation, Japan
 SO PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004014985	A1	20040219	WO 2003-JP10074	20030807
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2004067970	A2	20040304	JP 2002-233007	20020809
	JP 2004292782	A2	20041021	JP 2003-190335	20030702
	US 2004262574	A1	20041230	US 2004-490741	20040409
PRAI	JP 2002-233007	A	20020809		
	JP 2003-29977	A	20030206		
	WO 2003-JP10074	W	20030807		

AB A triarylamine polymer with excellent solubility and film-forming properties and improved thermal stability is represented by general formula Ar5N(Ar6)[Ar1N(Ar3)Ar2N(Ar4)]mAr7 [wherein Ar1, Ar2, Ar3, Ar4, Ar5, Ar6, and Ar7 each independently represents an (un)substituted C6-60 aromatic group, provided that Ar1 and Ar2 are the same or different and Ar3 and Ar4 are the same or different; and m ≥ 1]. The triarylamine polymer is prepared and used in manufacturing electronic devices such as

electroluminescent

devices. Thus, reacting 4,4'-diphenyl diiodide with 4-n-butyraniline in o-xylene in the presence of sodium-tert-butoxide and then with bromobenzene in the presence of tris(dibenzylidene acetone)dipalladium:chloroform complex and tri-tert-butylphosphine gave a triarylamine polymer having Tg 171°.

IC ICM C08G073-02

ICS H05B033-14; H05B033-22

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 76

ST polyamine polymer prepn electronic device thermal stability; triarylamine polymer prepn electronic device thermal stability; bromobenzene terminated diphenyl diiodide butylaniline copolymer prepn electroluminescent device

IT Electroluminescent devices

(triarylamine polymers useful for manufacturing electronic devices such as electroluminescent devices)

IT Polyamines

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(triarylamine polymers useful for manufacturing electronic devices such as

electroluminescent devices)

- IT 404596-11-8DP, reaction products with bromobenzene 659741-98-7DP,
 4-n-Butylaniline-4,4'-diphenyl diiodide copolymer, reaction products with
 bromobenzene and optionally with diphenylamine 659741-99-8P
 659742-00-4DP, reaction products with bromobenzene **659742-01-5P**
659742-02-6P 659742-03-7DP, reaction products with bromobenzene
659742-04-8P 659742-06-0DP, reaction products with bromobenzene
659742-07-1P 659742-08-2DP, reaction products with bromobenzene
659742-09-3P 659742-10-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); **PREP (Preparation)**; USES (Uses)

(triarylamine polymers useful for manufacturing electronic devices such as
 electroluminescent devices)

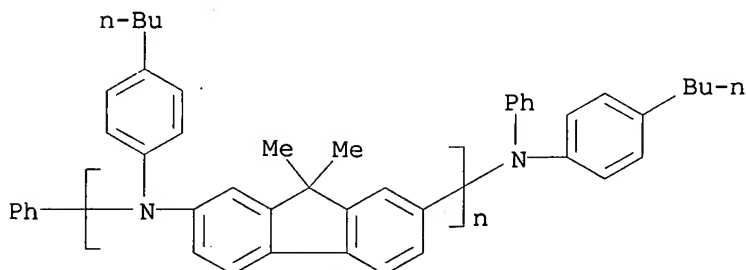
- IT **659742-01-5P 659742-02-6P 659742-04-8P**
659742-07-1P 659742-09-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); **PREP (Preparation)**; USES (Uses)

(triarylamine polymers useful for manufacturing electronic devices such as
 electroluminescent devices)

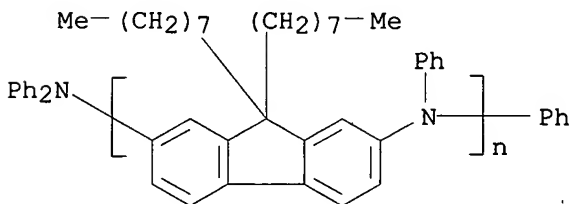
- RN 659742-01-5 HCAPLUS

- CN Poly[[(4-butylphenyl)imino](9,9-dimethyl-9H-fluorene-2,7-diyl)],
 α -phenyl- ω -[(4-butylphenyl)phenylamino]- (9CI) (CA INDEX
 NAME)



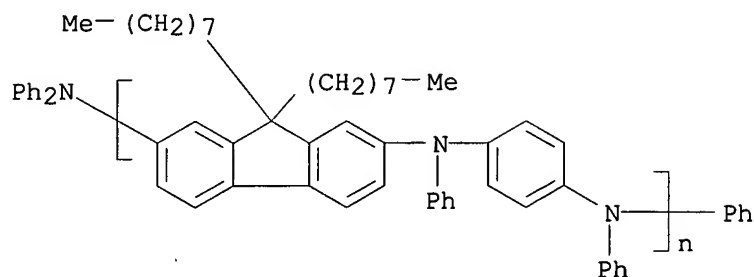
- RN 659742-02-6 HCAPLUS

- CN Poly[(phenylimino)(9,9-dioctyl-9H-fluorene-2,7-diyl)],
 α -phenyl- ω -(diphenylamino)- (9CI) (CA INDEX NAME)

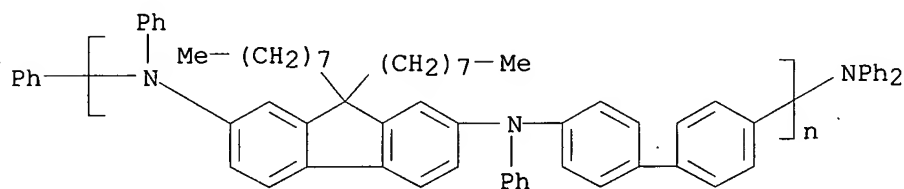


- RN 659742-04-8 HCAPLUS

- CN Poly[(phenylimino)-1,4-phenylene(phenylimino)(9,9-dioctyl-9H-fluorene-2,7-
 diyl)], α -phenyl- ω -(diphenylamino)- (9CI) (CA INDEX NAME)

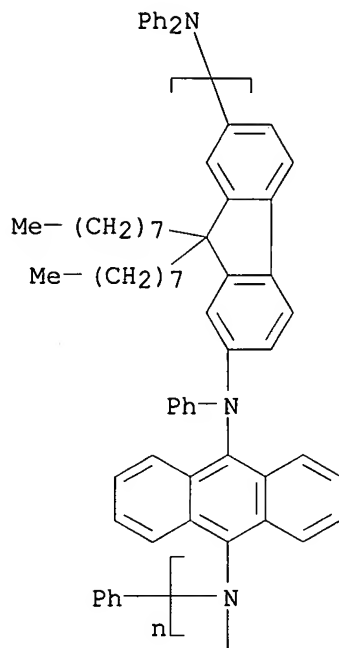


RN 659742-07-1 HCAPLUS
 CN Poly[(phenylimino) (9,9-dioctyl-9H-fluorene-2,7-diyl) (phenylimino) [1,1'-biphenyl]-4,4'-diyl], α -phenyl- ω -(diphenylamino)- (9CI) (CA INDEX NAME)



RN 659742-09-3 HCAPLUS
 CN Poly[(phenylimino)-9,10-anthracenediyl (phenylimino) (9,9-dioctyl-9H-fluorene-2,7-diyl)], α -phenyl- ω -(diphenylamino)- (9CI) (CA INDEX NAME)

PAGE 1-A



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Ph

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:202698 HCAPLUS
DN 138:238568
TI Conjugated polymers containing spirobifluorene units and the use thereof
IN Becker, Heinrich; Treacher, Kevin; Spreitzer, Hubert; Falcou, Aurelie;
Stoessel, Philipp; Buesing, Arne; Parham, Amir
PA Covion Organic Semiconductors G.m.b.H., Germany
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003020790	A2	20030313	WO 2002-EP9628	20020829
	WO 2003020790	A3	20030912		
	W: CN, JP, KR, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,				
	LU, MC, NL, PT, SE, SK, TR				
	DE 10143353	A1	20030320	DE 2001-10143353	20010904

EP 1427768 A2 20040616 EP 2002-772227 20020829
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, CY, TR, BG, CZ, EE, SK

PRAI DE 2001-10143353 A 20010904
 WO 2002-EP9628 W 20020829

AB Spirobifluorene-type unit-containing conjugated polymer, useful in optoelectronic devices, are manufactured containing ≥ 1 addnl. unit that (a) improves the insertion or transportation of holes, (b) improves the insertion or transportation of electrons, (c) accomplishes both (a) and (b), and (d) exhibits phosphorescence. A typical polymer was manufactured by polymerization of 1.768 g 2,7-dibromo-2',3',6',7'-tetrakis(2-methylbutoxy)spirobifluorene with 0.183 g N,N'-bis(4-bromophenyl)-N,N'-bis(4-tert-butylphenyl)benzidine by the Yamamoto coupling in PhMe-DMF mixture in the presence of 1,5-cyclooctadiene, Ni(COD)₂, and 2,2'-bipyridyl.

IC ICM C08G061-00

ICS C09K011-06; H05B033-14; H01L051-30

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 73, 76

ST conjugated spirobifluorene polymer optoelectronic device; dibromotetrakis methylbutoxyspirobifluorene copolymer bisbromophenyl tertiary butylphenyl benzidine manuf

IT Optoelectronic semiconductor devices

(conjugated polymers containing spirobifluorene units and units that phosphoresce for optoelectronic devices)

IT Cardo polymers

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)

(conjugated polymers containing spirobifluorene units and units that phosphoresce for optoelectronic devices)

IT Luminescent substances

(electroluminescent; conjugated polymers containing spirobifluorene units and units that phosphoresce for optoelectronic devices)

IT 501434-82-8P 501434-82-8P 501434-85-1P 501434-87-3P 501434-88-4P

501434-90-8P 501434-92-0P 501434-94-2P 501434-95-3P 501434-96-4P

501434-97-5P 501434-98-6P 501434-99-7P 501435-00-3P 501435-01-4P

501435-03-6P 501435-04-7P 501435-05-8P 501435-07-0P 501435-08-1P

501435-10-5P 501435-11-6P 501435-12-7P **501435-13-8P**

501435-14-9P 501435-15-0P 501435-16-1P 501435-17-2P 501435-18-3P

501435-20-7P 501435-21-8P 501435-23-0P 501435-24-1P 501435-25-2P

501435-26-3P **501435-27-4P 501435-28-5P**

501435-29-6P 501435-30-9P 501657-52-9P

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**

(Preparation)

(conjugated polymers containing spirobifluorene units and units that phosphoresce for optoelectronic devices)

IT 165190-76-1P, 4,7-Bis(thien-2-yl)-2,1,3-benzothiadiazole 501434-69-1P,
 5'-tert-Butyl-2'-(4''-tert-butylphenyl)-2,3-bis(2-methylbutyloxy)biphenyl
 501434-70-4P, 2-Bromo-5'-tert-butyl-2'-(4''-tert-butylphenyl)-4,5-bis(2-methylbutyloxy)biphenyl 501434-74-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(monomer precursor; conjugated polymers containing spirobifluorene units and units that phosphoresce for optoelectronic devices)

IT 122-39-4, Diphenylamine, reactions 134-81-6, Benzil 328-70-1,

1-Bromo-3,5-bis(trifluoromethyl)benzene 401-78-5, 1-Bromo-3-

trifluoromethylbenzene 553-94-6, 2-Bromo-1,4-dimethylbenzene

1122-91-4, 4-Bromobenzaldehyde 6165-68-0, Thiophene-2-boronic acid

14348-75-5, 2,7-Dibromofluoren-9-one 15155-41-6,

4,7-Dibromo-2,1,3,-benzothiadiazole 31558-41-5, 4-Bromo-2,5-

dimethoxybenzaldehyde 69272-50-0, 3,6-Dibromo-1,2-phenylenediamine

70728-89-1, 2-Bromo-4,4'-di-tert-butylbiphenyl 171408-84-7,
2,7-Dibromo-9,9'-spirobifluorene 171408-88-1, 2,7-Diiodo-2',7'-dibromo-
9,9'-spirobifluorene 340148-67-6, 3,4-Bis(2-
methylbutyloxy)benzeneboronic acid 501434-77-1D, derivs. 501434-79-3D,
derivs.

RL: RCT (Reactant); RACT (Reactant or reagent)

(monomer precursor; conjugated polymers containing spirobifluorene units
and units that phosphoresce for optoelectronic devices)

IT 94544-77-1P, 5,8-Dibromo-2,3-diphenylquinoxaline 288071-87-4P,
4,7-Bis(2-bromo-5-thienyl)-2,1,3-benzothiadiazole 501434-68-0P,
2,7-Dibromo-8'-tert-butyl-5'-(4''-tert-butylphenyl)-2',3'-bis(2-
methylbutyloxy)spirobifluorene 501434-71-5P 501434-72-6P
501434-73-7P, 4-Bromo-7-(2-bromo-5-thienyl)-2,1,3-benzothiadiazole
501434-75-9P, 1-(2-Ethylhexyloxy)-4-methoxy-2,5-bis-(4-bromo-2,5-
dimethoxystyryl)benzene 501434-76-0P, 2,3,6,7-Tetrakis(2-methylbutoxy)-
2',7'-bis(4-bromostyryl)-9,9'spirobifluorene 501434-78-2P,
1,4-Dibromo-2,5-(4-fluorostyryl)benzene 501434-80-6P,
2,7-Dibromo-2',7'-(N,N-diphenylamino)-9,9'-spirobifluorene 501657-51-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
(Reactant or reagent)

(monomer; conjugated polymers containing spirobifluorene units and units
that phosphoresce for optoelectronic devices)

IT **501435-13-8P 501435-27-4P 501435-28-5P**
501435-29-6P

RL: IMF (Industrial manufacture); PRP (Properties); **PREP**
(Preparation)

(conjugated polymers containing spirobifluorene units and units that
phosphoresce for optoelectronic devices)

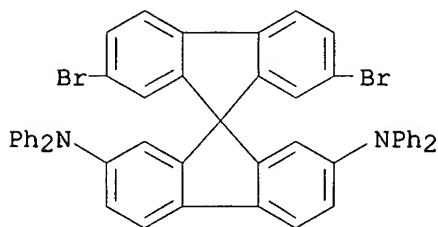
RN 501435-13-8 HCAPLUS

CN 9,9'-Spirobi[9H-fluorene]-2,7-diamine, 2',7'-dibromo-N,N,N',N'-tetraphenyl-
polymer with 5,8-dibromo-2,3-diphenylquinoxaline, 2,7-dibromo-
2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and
2,2'-[2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7-
diyl]bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

CM 1

CRN 501434-80-6

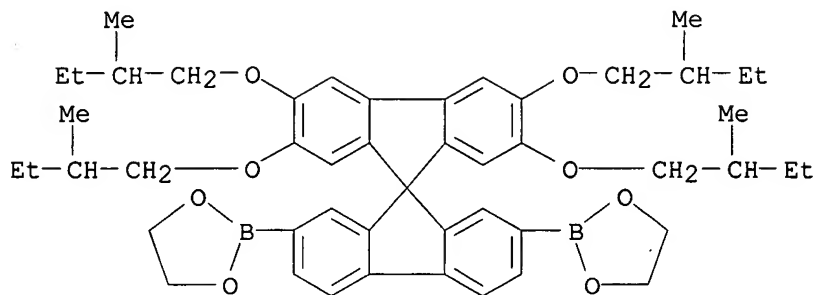
CMF C49 H32 Br2 N2



CM 2

CRN 396123-43-6

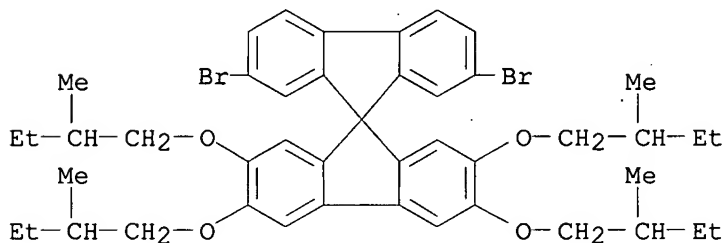
CMF C49 H62 B2 O8



CM 3

CRN 395059-23-1

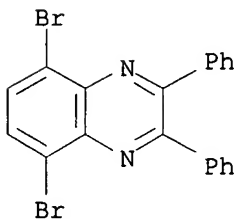
CMF C45 H54 Br2 O4



CM 4

CRN 94544-77-1

CMF C20 H12 Br2 N2



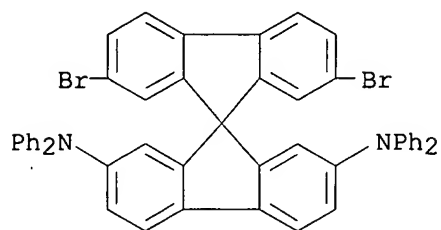
RN 501435-27-4 HCAPLUS

CN 9,9'-Spirobi[9H-fluorene]-2,7-diamine, 2',7'-dibromo-N,N,N',N'-tetraphenyl-, polymer with N,N'-bis(4-bromophenyl)-N,N'-bis[4-(1,1-dimethylethyl)phenyl][1,1'-biphenyl]-4,4'-diamine, 2,7-dibromo-2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and 2,2'-[2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7-diyl]bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

CM 1

CRN 501434-80-6

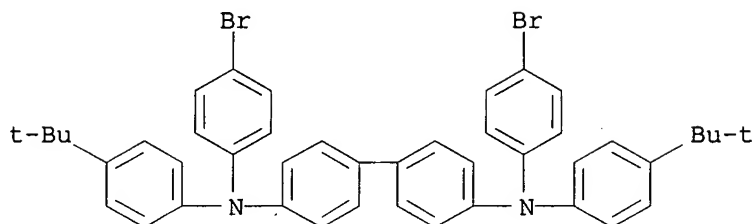
CMF C49 H32 Br2 N2



CM 2

CRN 463944-36-7

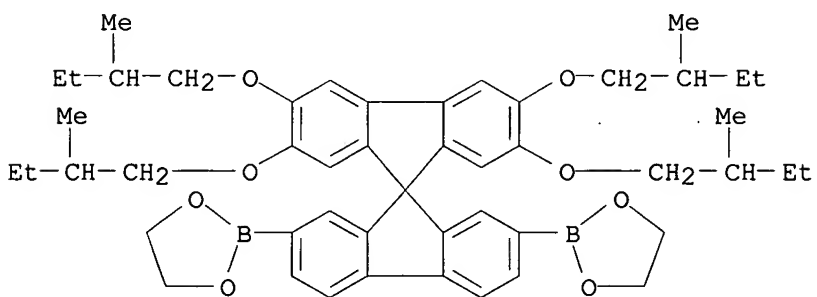
CMF C44 H42 Br2 N2



CM 3

CRN 396123-43-6

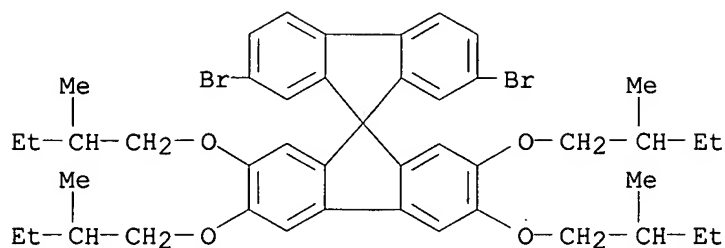
CMF C49 H62 B2 08



CM 4

CRN 395059-23-1

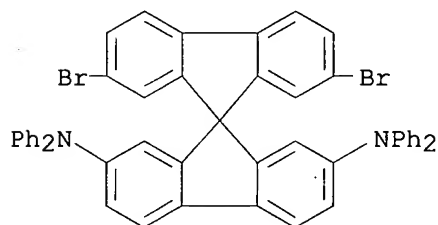
CMF C45 H54 Br2 04



RN 501435-28-5 HCAPLUS
 CN 9,9'-Spirobi[9H-fluorene]-2,7-diamine, 2',7'-dibromo-N,N,N',N'-tetraphenyl-
 , polymer with N,N'-bis(4-bromophenyl)-N,N'-bis[4-(1,1-
 dimethylethyl)phenyl][1,1'-biphenyl]-4,4'-diamine and 2',7'-dibromo-
 2,3,6,7-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] (9CI) (CA
 INDEX NAME)

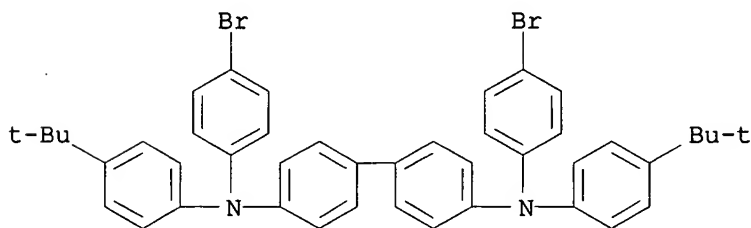
CM 1

CRN 501434-80-6
 CMF C49 H32 Br2 N2



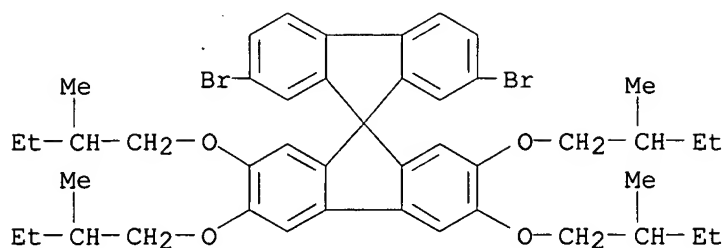
CM 2

CRN 463944-36-7
 CMF C44 H42 Br2 N2



CM 3

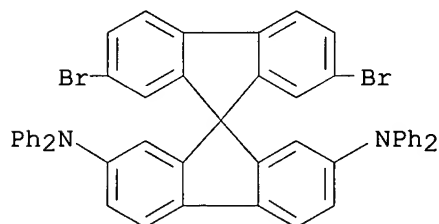
CRN 395059-23-1
 CMF C45 H54 Br2 O4



RN 501435-29-6 HCAPLUS
 CN 9,9'-Spirobi[9H-fluorene]-2,7-diamine, 2',7'-dibromo-N,N,N',N'-tetraphenyl-, polymer with N,N'-bis(4-bromophenyl)-N,N'-bis[4-(1,1-dimethylethyl)phenyl][1,1'-biphenyl]-4,4'-diamine, 5,8-dibromo-2,3-diphenylquinoxaline, 2,7-dibromo-2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene] and 2,2'-[2',3',6',7'-tetrakis(2-methylbutoxy)-9,9'-spirobi[9H-fluorene]-2,7-diyl]bis[1,3,2-dioxaborolane] (9CI) (CA INDEX NAME)

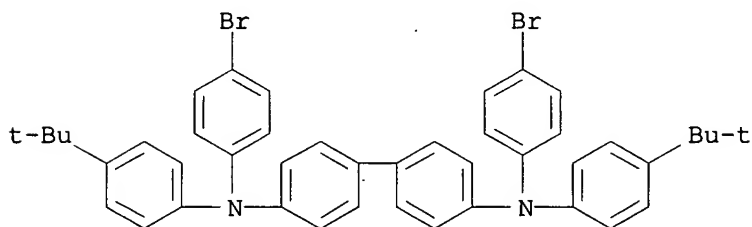
CM 1

CRN 501434-80-6
 CMF C49 H32 Br2 N2



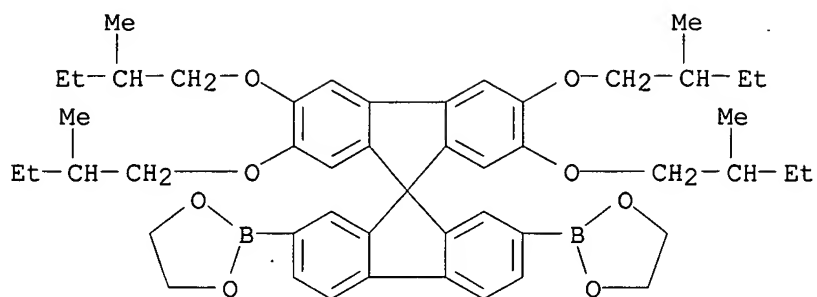
CM 2

CRN 463944-36-7
 CMF C44 H42 Br2 N2



CM 3

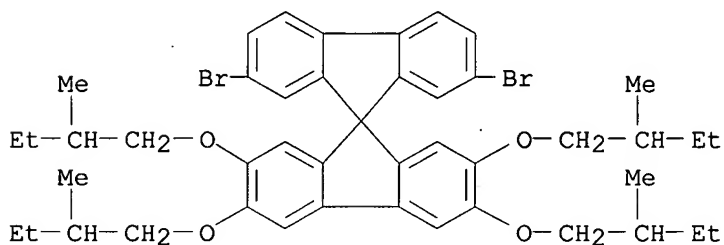
CRN 396123-43-6
 CMF C49 H62 B2 O8



CM 4

CRN 395059-23-1

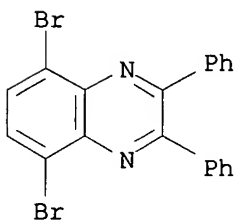
CMF C45 H54 Br2 O4



CM 5

CRN 94544-77-1

CMF C20 H12 Br2 N2



L82 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:786147 HCAPLUS

DN 138:90169

TI Novel deep blue fluorescent fluorene-based copolymer containing hole-transporting arylamine segments

AU Liu, Bin; Huang, Wei

CS Department of Chemistry, Institute of Materials Research and Engineering, National University of Singapore, Singapore, 119260, Singapore

SO Thin Solid Films (2002), 417(1-2), 206-210

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

CODEN: THSFAP; ISSN: 0040-6090

PB Elsevier Science B.V.

DT Journal

LA English

AB A novel conjugated copolymer-poly((9,9-dioctylfluorene)-alt-(N,N'-diphenylbenzidine)), bearing an arylamine moiety in the polymer backbone, has been synthesized by a modified Ullmann reaction. The new polymer can be easily dissolved in common organic solvents and form uniform thin films. The NMR and FT-IR spectra showed that it has a well-defined structure. Thermogravimetric analyses and differential scanning calorimetry analyses indicated that the polymer exhibits good thermal stability with the onset decomposition temperature in nitrogen at 300° and a glass-transition temperature

(T_g) at 148°. The UV and photoluminescence spectra of the film samples indicate that the polymer has a band gap of 2.83 eV and deep blue light-emission. Cyclic voltammetry illustrated that the polymer can be reversibly p-doped and dedoped at rather low oxidative potential compared with poly(dialkylfluorene), implying that the new polymer has better hole-transporting property. All the results demonstrate that the obtained polymer is a promising deep blue light emission or hole-transporting material for PLED applications.

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 73, 76

ST conjugated copolymer fluorescent fluorene contg prepn photoluminescence property

IT Polymers, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(conjugated; preparation and property of novel deep blue fluorescent fluorene-based polymers)

IT Band gap

Electric current

Fluorescence

Glass transition temperature

Luminescence

Thermal stability

Ullmann reaction

(preparation and property of novel deep blue fluorescent fluorene-based polymers)

IT 123863-99-0, 9,9-Dioctylfluorene

RL: RCT (Reactant); RACT (Reactant or reagent)

(in preparation and property of novel deep blue fluorescent fluorene-based polymers)

IT 278176-06-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in preparation and property of novel deep blue fluorescent fluorene-based polymers)

IT 7553-56-2, Iodine, reactions 7758-05-6

RL: RGT (Reagent); RACT (Reactant or reagent)

(in preparation and property of novel deep blue fluorescent fluorene-based polymers)

IT 484032-90-8P, 2,7-Diiodo-9,9-dioctylfluorene N,N'-diphenylbenzidine copolymer **484032-91-9P**

RL: PRP (Properties); SPN (Synthetic preparation); **PREP (Preparation)**

(preparation and property of novel deep blue fluorescent fluorene-based polymers)

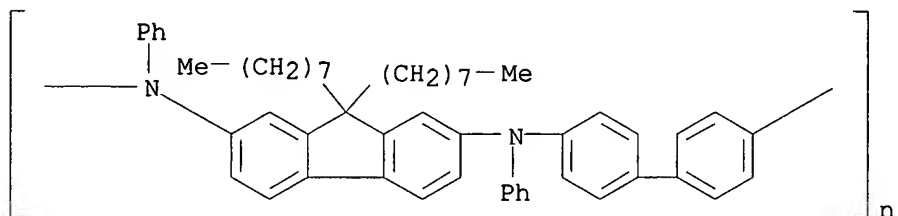
IT **484032-91-9P**RL: PRP (Properties); SPN (Synthetic preparation); **PREP**

(Preparation)

(preparation and property of novel deep blue fluorescent fluorene-based polymers)

RN 484032-91-9 HCAPLUS

CN Poly[(phenylimino) (9,9-dioctyl-9H-fluorene-2,7-diyl) (phenylimino) [1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:796466 HCAPLUS

DN 135:350468

TI Electrophotographic photoreceptor, cartridge, and machine.

IN Mashita, Kiyokazu; Kojima, Fumio; Koseki, Kazuhiro; Kamisaka, Tomozumi

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

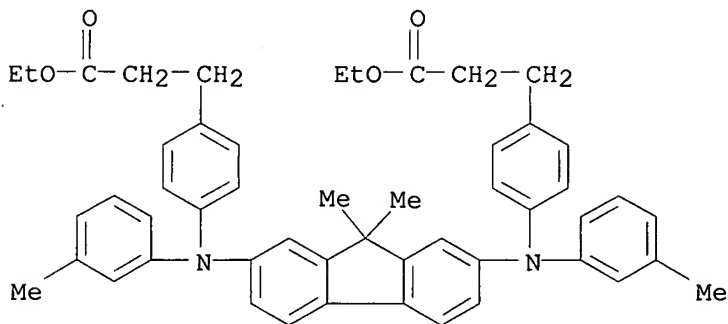
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001305773	A2	20011102	JP 2000-118316	20000419
PRAI	JP 2000-118316		20000419		
AB	An electrophotog. photoreceptor contains a polymer having charge transfer property and a fluoropolymer particles in the top layer of photosensitive layers. Cartridge and electrophotog. copying machine containing the photoreceptor are also disclosed. Photoreceptors show excellent wear resistance and sliding property.				
IC	ICM G03G005-147				
	ICS G03G005-147; G03G005-07				
CC	74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)				
ST	electrophotog photoreceptor charge transfer polymer; fluoropolymer particle lubricant electrophotog photoreceptor				
IT	Electrophotographic photoconductors (photoreceptors) (charge transfer layer; polyester-polyamine type charge transfer agents and fluoropolymer lubricants for)				
IT	Fluoropolymers, uses RL: MOA (Modifier or additive use); USES (Uses) (electrophotog. charge transfer layer containing fluoropolymer particles as lubricant)				
IT	Lubricants (fluoropolymer particle; electrophotog. charge transfer layer containing fluoropolymer lubricant)				
IT	Polyesters, preparation RL: DEV (Device component use); SPN (Synthetic preparation); PREP				

(Preparation); USES (Uses)
 (polyamine-; electrophotog. charge transfer agent)
 IT Polyamines
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP
 (Preparation); USES (Uses)
 (polyester-; electrophotog. charge transfer agent)
 IT Fluoropolymers, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (solid lubricant; electrophotog. charge transfer layer containing
 fluoropolymer particles as lubricant)
 IT 184583-58-2P 188540-93-4P 189039-19-8P 371244-22-3P 371244-23-4P
 371244-24-5P **371244-26-7P 371244-27-8P**
 RL: DEV (Device component use); SPN (Synthetic preparation); **PREP**
(Preparation); USES (Uses)
 (electrophotog. charge transfer agent)
 IT 9002-84-0, Lublon 1-2 110734-93-5, Aron GF 150
 RL: MOA (Modifier or additive use); USES (Uses)
 (solid lubricant; electrophotog. charge transfer layer containing
 fluoropolymer particles as lubricant)
 IT **371244-26-7P 371244-27-8P**
 RL: DEV (Device component use); SPN (Synthetic preparation); **PREP**
(Preparation); USES (Uses)
 (electrophotog. charge transfer agent)
 RN 371244-26-7 HCAPLUS
 CN Benzenepropanoic acid, 4,4'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[(3-
 methylphenyl)imino]]bis-, diethyl ester, polymer with 1,2-ethanediol (9CI)
 (CA INDEX NAME)

CM 1

CRN 371244-25-6
 CMF C51 H52 N2 O4



CM 2

CRN 107-21-1
 CMF C2 H6 O2

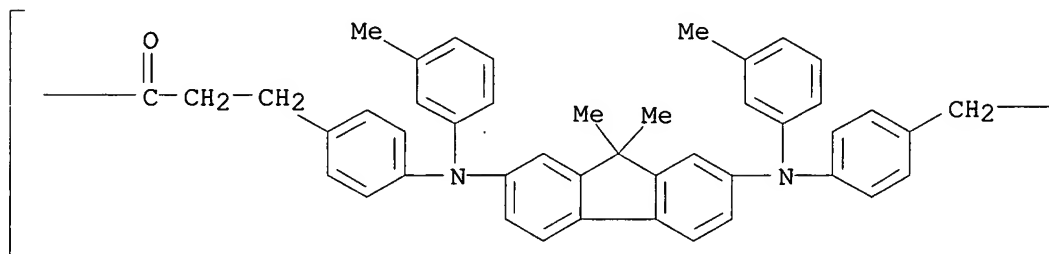
HO-CH2-CH2-OH

RN 371244-27-8 HCAPLUS

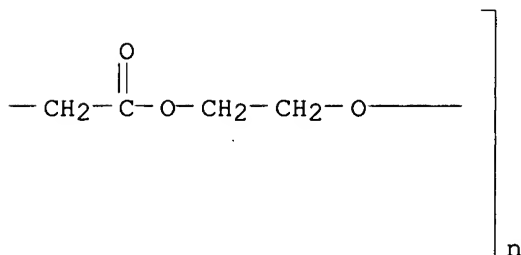
KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

CN Poly[oxy-1,2-ethanedioxy(1-oxo-1,3-propanediyl)-1,4-phenylene[(3-methylphenyl)imino](9,9-dimethyl-9H-fluorene-2,7-diyl)[(3-methylphenyl)imino]-1,4-phenylene(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L82 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:451224 HCAPLUS

DN 135:53484

TI Electrophotographic photoreceptor, process cartridge, and electrophotographic apparatus

IN Sekiya, Michiyo; Kikuchi, Norihiro; Maruyama, Akio; Amamiya, Shoji; Uematsu, Hiroki; Tanaka, Hiroyuki; Daichi, Atsushi

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 115 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001166519	A2	20010622	JP 1999-353343	19991213
PRAI	JP 1999-353343		19991213		

AB The protective layer of the electrophotog. photoreceptor contains a compound formed by the polymerization of a pos. hole transporting compound having ≥ 1 polymerizable functional group and the photosensitive layer contains a charge-transporting substance having the mol. w.t ≥ 350 . The polymerization is initiated by an electron beam with an acceleration energy of ≤ 250 kV and a dose of 1-100 Mrad. The process cartridge and the electrophotog. apparatus are also claimed. The protective layer provided scratch resistance without sacrificing the sensitivity of the

photoreceptor.

IC ICM G03G005-147
ICS G03G005-06; G03G005-07

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38

ST electrophotog photoreceptor protective layer hole transporting polymer;
electron beam polymn electrophotog photoreceptor

IT Electrophotographic photoconductors (photoreceptors)
(hole hole transporting polymer contained in protective layer)

IT Electrophotographic apparatus
(hole hole transporting polymer contained in protective layer of electrophotog. photoreceptor)

IT Electron beams
(irradiation; polymerization of hole transporting substance contained in electrophotog. photoreceptor)

IT Polymerization
(of hole transporting substance contained in electrophotog. photoreceptor)

IT 65181-78-4 119344-18-2 132571-92-7 154075-58-8 204135-52-4
344449-56-5 344449-57-6 344449-58-7 344449-59-8
RL: DEV (Device component use); USES (Uses)
(charge-transporting substance contained in electrophotog. photoreceptor)

IT 268222-22-6P 268222-38-4P 268222-43-1P 268223-53-6P 269402-73-5P
344449-37-2P 344449-39-4P 344449-41-8P 344449-43-0P 344449-45-2P
344449-48-5P **344449-50-9P** 344449-53-2P 344449-55-4P
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(hole hole transporting polymer contained in protective layer of electrophotog. photoreceptor)

IT **344449-50-9P**
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(hole hole transporting polymer contained in protective layer of electrophotog. photoreceptor)

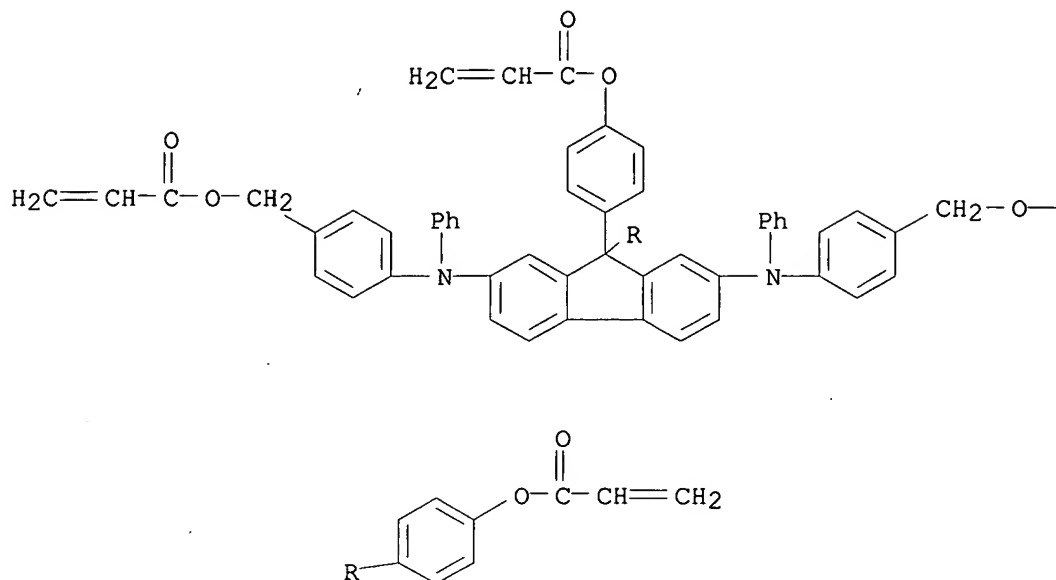
RN 344449-50-9 HCAPLUS

CN 2-Propenoic acid, [2,7-bis[[4-[(1-oxo-2-propenyl)oxy]methyl]phenyl]phenyl amino]-9H-fluoren-9-ylidene]di-4,1-phenylene ester, homopolymer '(9CI) (CA INDEX NAME)

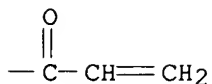
CM 1

CRN 344449-49-6
CMF C63 H48 N2 O8

PAGE 1-A



PAGE 1-B



L82 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:559295 HCAPLUS

DN 132:222959

TI Novel triarylamine polymers as hole transport materials in OLEDs

AU Thelakkat, Mukundan; Schmitz, Christoph; Schmidt, Hans-Werner

CS Makromolekulare Chemie I and Bayreuther Institut fur, University of Bayreuth, Bayreuth, 95440, Germany

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(2), 1230-1231

CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal

LA English

AB We present some new homopolymers in which the electroactive unit, triarylamine is connected through naphthyl group in the main chain. The polymeric naphthylphenyldiamines (poly-NPD)s and poly(triphenyldiamine)s (poly-TPD)s synthesized from bis(N,N-diaryl)amines and aryldiiodides possess average mol. wts. of about 104 g/mol. They are soluble in THF, CHCl₃, etc and form stable thin films on solution casting. All the polymers exhibit

high glass transition temps. (T_g) in the range of 197° to 232°. The polymers are electrochem. stable and the HOMO energy values determined from cyclic voltammetry measurements lie between -5.10 and -5.17 eV with respect to vacuum energy level. The suitability and efficiency of some of these polymers as hole transport material in organic light emitting diodes (OLEDs) is also evaluated using a combinatorial method.

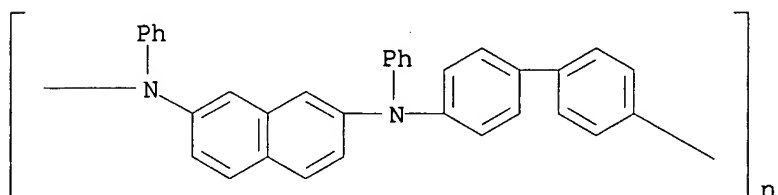
- CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36, 73, 76
- ST polynaphthylphenylamine polytriphenyldiamine prepn hole transport material; electroluminescent device hole transport material
polynaphthylphenylamine polytriphenyldiamine; light emitting diode hole transport material polynaphthylphenylamine polytriphenyldiamine
- IT Electric conductors
(hole; novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT Electroluminescent devices
Glass transition temperature
HOMO (molecular orbital)
Hole transport
Redox potential
(novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT Polyamines
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT Polyethers, preparation
Polyethers, preparation
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyamine-; novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT Polyamines
Polyamines
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyether-; novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT 239113-52-1P 261510-05-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(model compound; novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT 201026-15-5P 201026-18-8P 261509-99-3P **261510-00-3P**
261510-01-4P **261510-02-5P** 261510-03-6P **261510-04-7P**
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(novel triarylamine polymers as hole transport materials in organic light emitting diodes)
- IT 7429-90-5, Aluminum, uses 50926-11-9, ITO
RL: DEV (Device component use); USES (Uses)
(novel triarylamine polymers as hole transport materials in organic light emitting diodes containing)
- IT **261510-00-3P 261510-02-5P 261510-04-7P**

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); **PREP** (Preparation); USES (Uses)

(novel triarylamine polymers as hole transport materials in organic light emitting diodes)

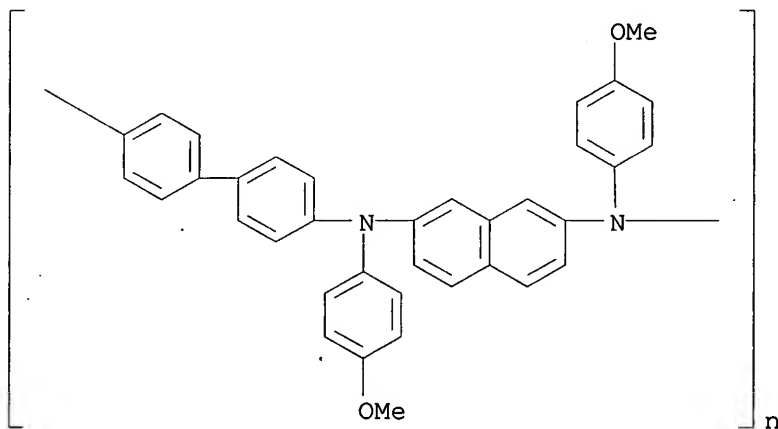
RN 261510-00-3 HCAPLUS

CN Poly[(phenylimino)-2,7-naphthalenediyl(phenylimino)[1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



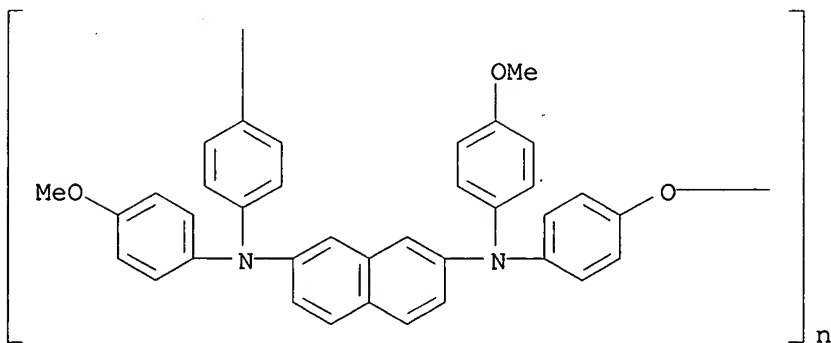
RN 261510-02-5 HCAPLUS

CN Poly[[(4-methoxyphenyl) imino]-2,7-naphthalenediyl[(4-methoxyphenyl) imino][1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 261510-04-7 HCAPLUS

CN Poly[oxy-1,4-phenylene[(4-methoxyphenyl) imino]-2,7-naphthalenediyl[(4-methoxyphenyl) imino]-1,4-phenylene] (9CI) (CA INDEX NAME)



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:758676 HCAPLUS

DN 130:73811

TI Styryl-containing polymer, its manufacture, and organic electroluminescent device, electrophotographic photoreceptor, and hole-transporting material using it

IN Ueda, Hideaki; Kitahora, Takeshi; Nozaki, Takeshi

PA Minolta Camera Co., Ltd., Peop. Rep. China

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10310635	A2	19981124	JP 1997-119192	19970509
	US 6066712	A	20000523	US 1998-74914	19980508
PRAI	JP 1997-119192	A	19970509		
	JP 1997-119194	A	19970509		

AB The styryl-containing polymer is represented by [Ar1CH:CHAr2N(Ar3)[Ar5N(Ar6)]m Ar4CH:CH]n (Ar1-2, Ar4 = arylene; Ar5 = arylene, 2-valent condensed polycyclic group; Ar3, Ar6 = alkyl, aralkyl, aryl; Ar1-6 may be substituted; m = 0-3; n = natural number). The above polymer is manufactured

by

the reaction between a P compound XCH2Ar1CH2X [X = PO(OR1)2 or PR23.Y; R1 = lower alkyl; R2 = cycloalkyl, aryl; Y = halo] and an aldehyde compound OCHAr2N(Ar3)[Ar5N(Ar6)]mAr4CHO. The electroluminescent device contains the polymer in ≥1 organic compound thin layer including a light-emitting layer and the photoreceptor contains the polymer as a charge-transporting material. The hole-transporting material composed of the polymer is also claimed. The styryl-containing polymer shows good performance in charge-transporting and optical conductivity even after repeated use.

IC ICM C08G061-12

ICS C09K011-06; G03G005-06; H05B033-22

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37, 38, 73

ST styryl polymer charge transport material; electrophotog photoreceptor

styryl polymer charge transport; electroluminescent device styryl polymer optical cond; hole transport material styryl polymer

IT Electroluminescent devices

Electrophotographic photoconductors (photoreceptors)

(styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)

IT 217632-29-6P 217632-30-9P **217632-31-0P**

RL: DEV (Device component use); IMF (Industrial manufacture); TEM

(Technical or engineered material use); **PREP (Preparation)**; USES

(Uses)

(styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)

IT 217632-32-1 217632-33-2 217632-34-3 217632-35-4 217632-36-5

217632-37-6 217632-38-7 217632-39-8 217632-40-1 217632-41-2

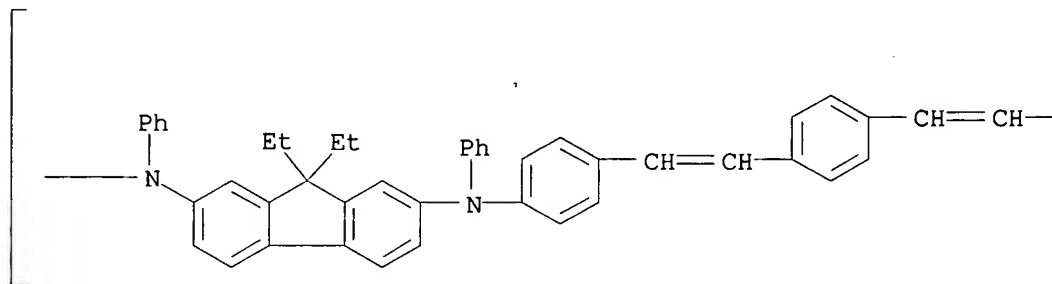
217632-42-3 217632-43-4 217632-44-5 217632-45-6 217632-46-7

217632-47-8 217632-48-9 217632-49-0

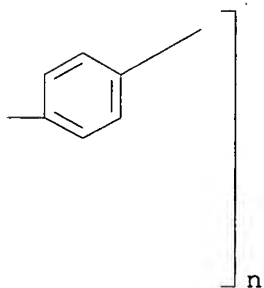
RL: DEV (Device component use); TEM (Technical or engineered material

use); USES (Uses)
 (styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)
 IT 10273-74-2 40817-03-6 122112-54-3 217632-50-3 217632-51-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)
 IT 217632-31-0P
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
 (styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)
 RN 217632-31-0 HCAPLUS
 CN Poly[(phenylimino) (9,9-diethyl-9H-fluorene-2,7-diyl) (phenylimino)-1,4-phenylene-1,2-ethenediyl-1,4-phenylene-1,2-ethenediyl-1,4-phenylene] (9CI)
 (CA INDEX NAME)

PAGE 1-A



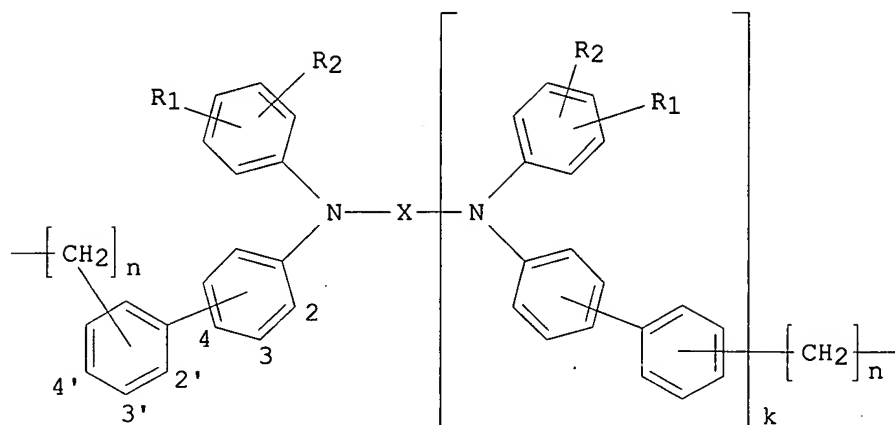
PAGE 1-B



L82 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1997:410476 HCAPLUS
 DN 127:34673
 TI Electric charge transporting polymers and organic electronic devices using them
 IN Nukada, Katsuki; Iwasaki, Masahiro; Imai, Akira
 PA Fuji Xerox Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09110974	A2	19970428	JP 1995-293761	19951018
	JP 3058069	B2	20000704		
	US 5817739	A	19981006	US 1996-732977	19961016
PRAI	JP 1995-293761	A	19951018		
GI					



I

- AB The title polymers comprise polyester-polyether-polyamines with repeating unit $H(YO)_mO[COACO_2(YO)_m]pH$ or $B[COACO_2(YO)_mCOZCO_2(YO)_m]pCOACOB'$ [Y = divalent hydrocarbyl; Z = divalent hydrocarbyl; $A = I$; $R_1, R_2 = H$, alkyl, alkoxy, substituted amino, halogen; X = (substituted) divalent aromatic hydrocarbyl; $n = 1-5$; $k = 0,1$; $B, B' = O(YO)_mH$, $O(YO)_mCOZCO_2R'$; $R' = H$, alkyl, (substituted) aryl, (substituted) aralkyl; $m = 1-5$; $p = 5-5000$]. The polymers have good solubility and film-forming properties, and controlled ionization potential, and are especially used in electrophotog. photoreceptors. A polymer was prepared from N,N' -diphenyl- N,N' -bis[4-(4-ethoxycarbonylethylphenyl)phenyl]-[1,1'-biphenyl]4,4'-diamine, ethylene glycol, and isophthaloyl chloride.
- IC ICM C08G063-685
ICS G03G005-07
- CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 74
- ST conductive polyester polyether polyamine; electrophotog photoreceptor
conductive polymer
- IT Conducting polymers
Electrophotographic photoconductors (photoreceptors)
(elec. charge transporting polymers and organic electronic devices using them)
- IT Polyethers, preparation
Polyethers, preparation
Polyethers, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP

(Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (polyamine-polyester-; elec. charge transporting polymers and organic
 electronic devices using them)

IT Polyesters, preparation
 Polyesters, preparation
 Polyesters, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (polyamine-polyether-; elec. charge transporting polymers and organic
 electronic devices using them)

IT Polyamines
 Polyamines
 Polyamines
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (polyester-polyether-; elec. charge transporting polymers and organic
 electronic devices using them)

IT 18253-54-8P, Dichlorotinphthalocyanine 19717-79-4P,
 Chlorogalliumphthalocyanine 52324-93-3P, Titanium phthalocyanine
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
 (Preparation); USES (Uses)
 (elec. charge transporting polymers and organic electronic devices using
 them)

IT 184583-61-7P 185140-99-2P 187342-18-3P 187342-20-7P 187342-23-0P,
 N,N'-Diphenyl-N,N'-bis[4-(4-ethoxycarbonylethylphenyl)phenyl]-[1,1'-
 biphenyl]4,4'-diamine-ethylene glycol-isophthaloyl chloride copolymer
 190670-19-0P 190670-20-3P 190670-22-5P **190670-24-7P**
190670-25-8P 190670-27-0P 190670-29-2P 190670-30-5P
190670-32-7P 190670-34-9P 190670-35-0P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); **PREP**
(Preparation); USES (Uses)
 (elec. charge transporting polymers and organic electronic devices using
 them)

IT 178689-73-1P, N,N'-Diphenyl-N,N'-bis[4-(4-ethoxycarbonylethylphenyl)phenyl
]-[1,1'-biphenyl]4,4'-diamine 187342-17-2P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (elec. charge transporting polymers and organic electronic devices using
 them)

IT 91-15-6, Phthalonitrile 91-22-5, Quinoline, reactions 95-64-7
 531-91-9, N,N'-Diphenylbenzidine 3468-11-9, 1,3-Diiminoisoindoline
 5593-70-4, Titanium tetrabutoxide 7646-78-8, Tin (IV) chloride,
 reactions 13450-90-3, Gallium chloride 178689-82-2,
 4-Ethoxycarbonylethyl-4'-iodobiphenyl
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (elec. charge transporting polymers and organic electronic devices using
 them)

IT **190670-24-7P 190670-25-8P 190670-27-0P**
190670-32-7P 190670-34-9P 190670-35-0P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); **PREP**
(Preparation); USES (Uses)
 (elec. charge transporting polymers and organic electronic devices using
 them)

RN 190670-24-7 HCAPLUS

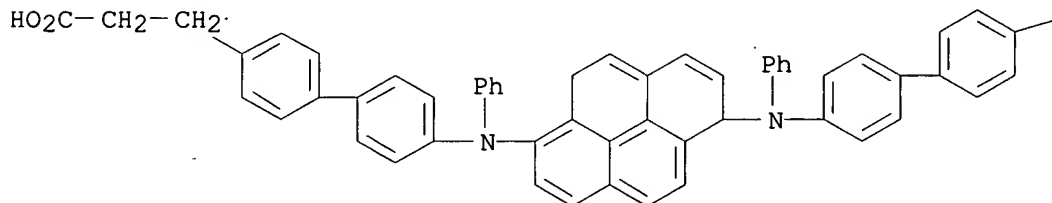
CN [1,1'-Biphenyl]-4-propanoic acid, 4',4'''-[(1,5-dihydro-1,6-pyrenediyl)bis(phenylimino)]bis-, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

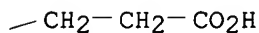
CRN 190670-23-6

CMF C58 H46 N2 O4

PAGE 1-A



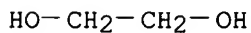
PAGE 1-B



CM 2

CRN 107-21-1

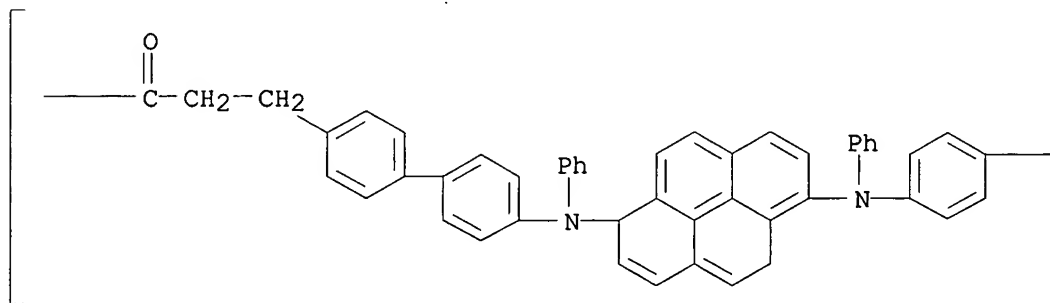
CMF C2 H6 O2



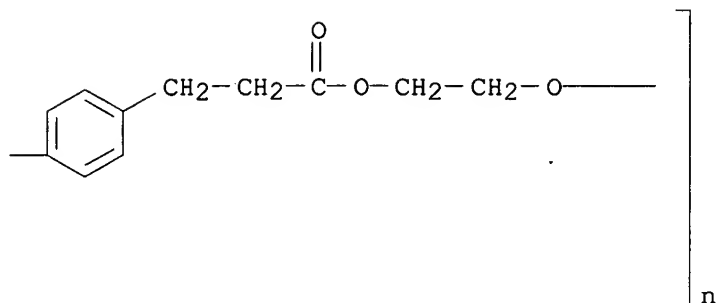
RN 190670-25-8 HCAPLUS

CN Poly[oxy-1,2-ethanediyl(oxy(1-oxo-1,3-propanediyl)[1,1'-biphenyl]-4,4'-diyl(phenylimino)-(1,5-dihydro-1,6-pyrenediyl)(phenylimino)[1,1'-biphenyl]-4,4'-diyl(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



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RN 190670-27-0 HCAPLUS

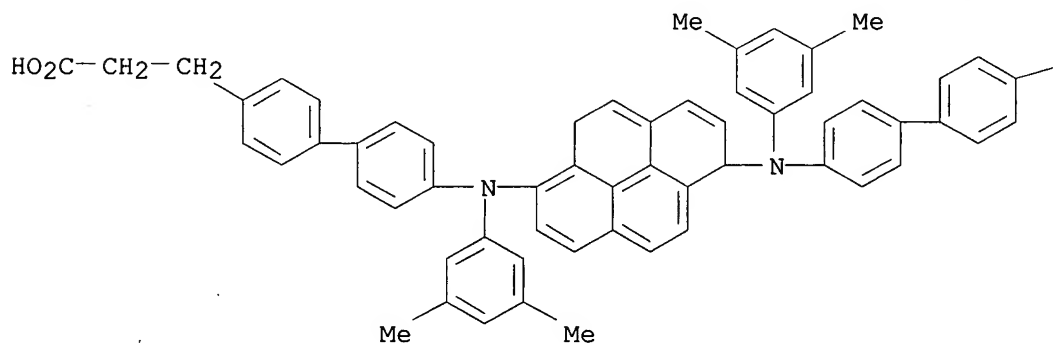
CN [1,1'-Biphenyl]-4,4'-dicarboxylic acid, polymer with 1,4-cyclohexanedimethanol and 4',4'''-[1,6-pyrenediylbis[(3,5-dimethylphenyl)imino]]bis[[1,1'-biphenyl]-4-propanoic acid] (9CI) (CA INDEX NAME)

CM 1

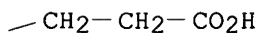
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CMF C62 H54 N2 O4

PAGE 1-A



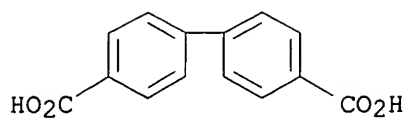
PAGE 1-B



CM 2

CRN 787-70-2

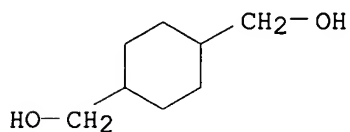
CMF C14 H10 O4



CM 3

CRN 105-08-8

CMF C8 H16 O2



RN 190670-32-7 HCAPLUS

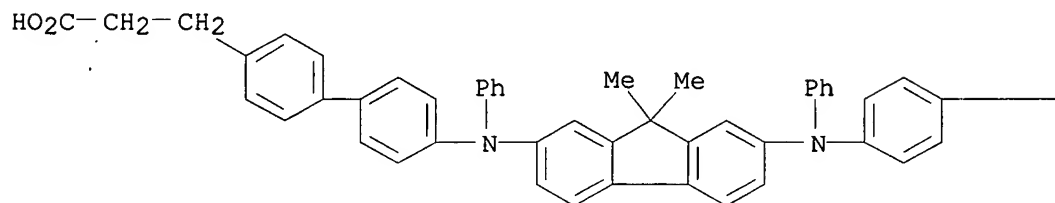
CN 1,4-Benzenedicarboxylic acid, polymer with 4',4'''-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis(phenylimino)]bis[[1,1'-biphenyl]-4-propanoic acid] and 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

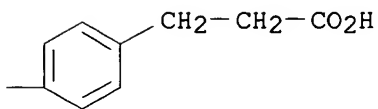
CRN 190670-31-6

CMF C57 H48 N2 O4

PAGE 1-A



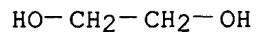
PAGE 1-B



CM 2

CRN 107-21-1

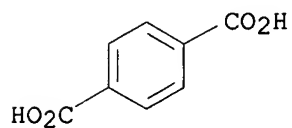
CMF C2 H6 O2



CM 3

CRN 100-21-0

CMF C8 H6 O4



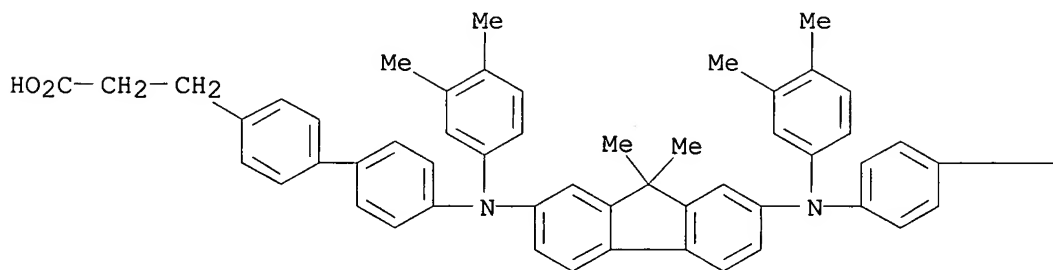
RN 190670-34-9 HCAPLUS

CN [1,1'-Biphenyl]-4-propanoic acid, 4',4'''-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[(3,4-dimethylphenyl)imino]]bis-, polymer with 1,2-cyclohexanediol (9CI) (CA INDEX NAME)

CM 1

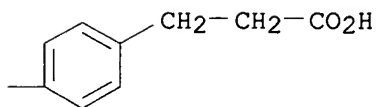
CRN 190670-33-8

CMF C61 H56 N2 O4



PAGE 1-A

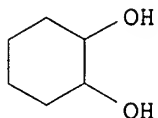
PAGE 1-B



CM 2

CRN 931-17-9

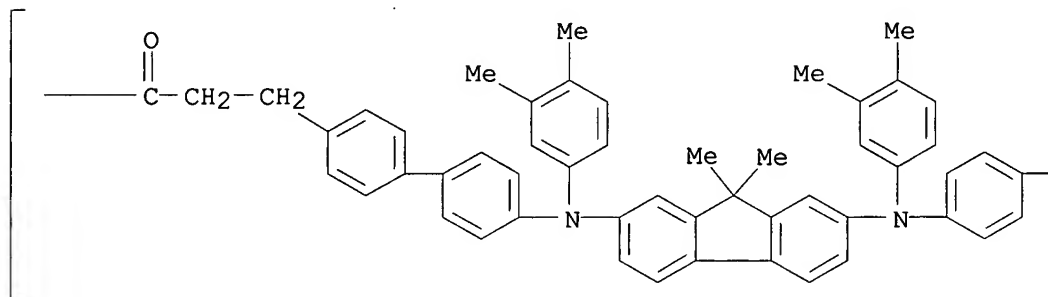
CMF C6 H12 O2



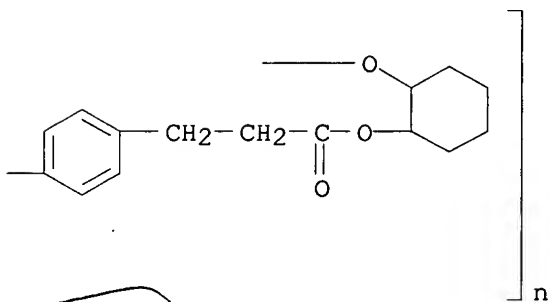
RN 190670-35-0 HCAPLUS

CN Poly[oxy-1,2-cyclohexanediyl]oxy(1-oxo-1,3-propanediyl)[1,1'-biphenyl]-4,4'-diyl[(3,4-dimethylphenyl)imino](9,9-dimethyl-9H-fluorene-2,7-diyl)[(3,4-dimethylphenyl)imino][1,1'-biphenyl]-4,4'-diyl(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

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PAGE 1-B



L82 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:684759 HCAPLUS

DN 125:342810

TI Organic electronic device using charge-transporting polyester

IN Seda, Katsumi; Imai, Akira; Iwasaki, Masahiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08208820	A2	19960813	JP 1995-197158	19950711
	JP 2865029	B2	19990308		
	US 5654119	A	19970805	US 1996-628766	19960405

PRAI	JP 1994-282486	A	19941024
	JP 1994-329853	A	19941206
	JP 1995-104588	A	19950406
	JP 1995-197158	A	19950711

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The device contains an charge-transporting polyester containing a partial structure I-a and/or I-b [R1-2 = H, alkyl, alkoxy, substituted amino, halo, aryl; X = a divalent aromatic group; T = a branched divalent C2-10 hydrocarbyl; k = 0, 1]. The polyester may satisfy these conditions; (1) containing -O-(Y-O)mR or -O-(Y-O)m-CO-Z-CO-OR' [Z = a dicarboxylic acid residue; R, R' = H, alkyl, aryl, aralkyl; Y = a dialc. residue; m = 1-5] as both end groups, (2) formed from a dicarboxylic acid containing I-a and/or I-b (and -OC-Z-CO-) as repeating units and a diol containing -O-(Y-O)m-, and (3) having a polymerization degree 5-5,000. The device may be an electrophotog. photoreceptor containing the polyester in its surface layer. The device shows good charge-transporting ability and abrasion resistance, and high photosensitivity for the photoreceptor.

IC ICM C08G063-685
ICS C08G073-00; C08L067-03; G03G005-07; H01L051-00; H01L031-08; H01L051-10

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

ST electron transporting polyester electrophotog photoreceptor; electronic device electron transporting polyester; arylamine benzidine electron transporting polyester

IT Electrophotographic photoconductors and photoreceptors
(organic electronic device using charge-transporting polyester)

IT Polyesters, preparation
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(organic electronic device using charge-transporting polyester)

IT 19717-79-4P, Chlorogallium phthalocyanine 26201-32-1P, Titanyl phthalocyanine 63371-84-6P, Hydroxygallium phthalocyanine
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(in preparation of charge-generating agent for electrophotog. photoreceptor)

IT 18253-54-8P, Dichlorotin phthalocyanine
RL: DEV (Device component use); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(in preparation of charge-generating agent for electrophotog. photoreceptor)

IT 91-15-6, Phthalonitrile 3468-11-9, 1,3-Diiminoisoindoline 5593-70-4 7772-99-8, Tin(II) chloride, reactions 13450-90-3, Gallium trichloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of charge-generating agent for electrophotog. photoreceptor)

IT 183136-44-9P 183136-46-1P 183136-48-3P 183136-50-7P
183136-52-9P 183136-54-1P 183136-56-3P 183136-57-4P
183136-58-5P 183136-59-6P **183136-60-9P 183136-61-0P**
183136-62-1P
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(in preparation of charge-transporting polyester for electrophotog. photoreceptor)

IT 183136-52-9P 183136-54-1P 183136-60-9P
183136-61-0P

RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(in preparation of charge-transporting polyester for electrophotog. photoreceptor)

RN 183136-52-9 HCAPLUS

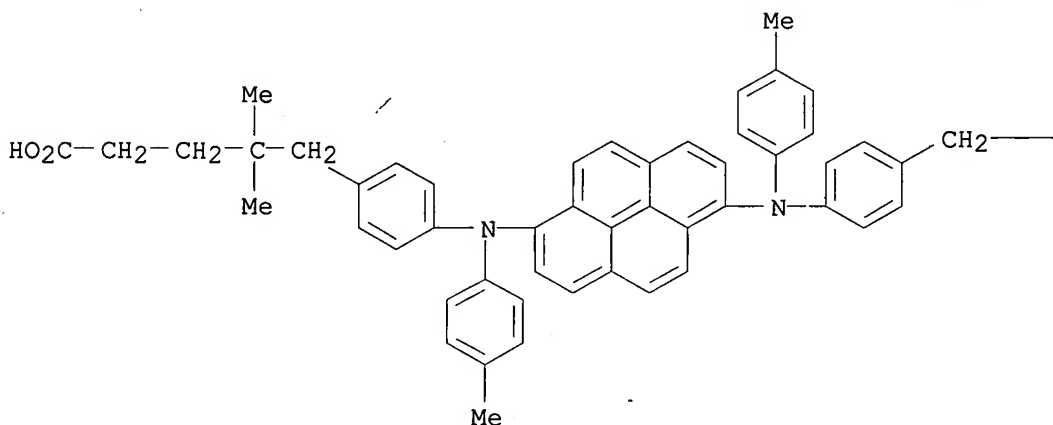
CN Benzenepentanoic acid, 4,4'-[1,6-pyrenediylbis[(4-methylphenyl)imino]]bis[γ,γ-dimethyl-, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

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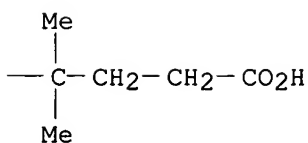
CRN 183136-51-8

CMF C56 H56 N2 O4

PAGE 1-A



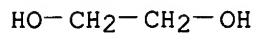
PAGE 1-B



CM 2

CRN 107-21-1

CMF C2 H6 O2



RN 183136-54-1 HCAPLUS

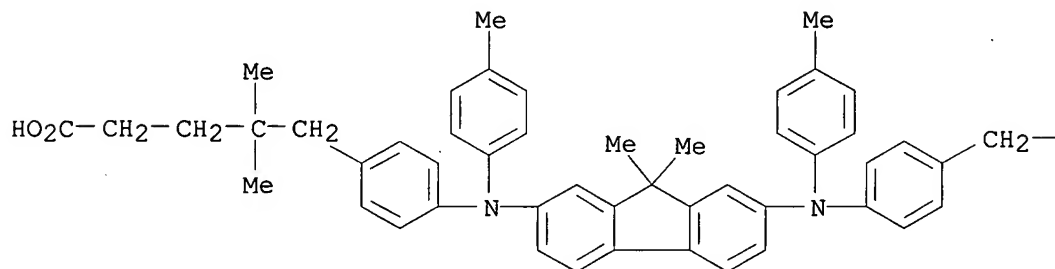
CN Benzenepentanoic acid, 4,4'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[(4-methylphenyl)imino]]bis[γ,γ-dimethyl-, polymer with 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

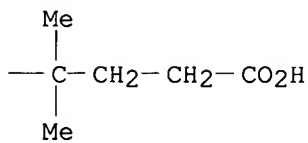
CRN 183136-53-0

CMF C55 H60 N2 O4

PAGE 1-A



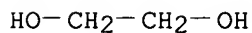
PAGE 1-B



CM 2

CRN 107-21-1

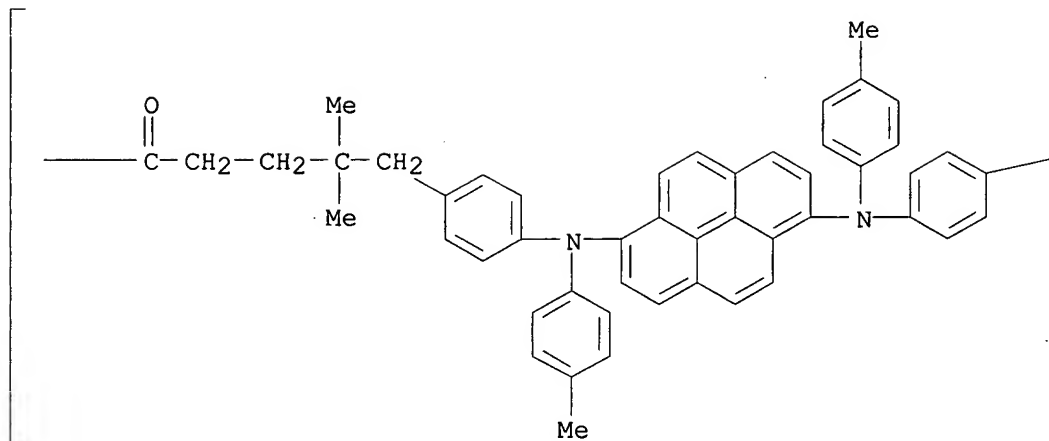
CMF C2 H6 O2



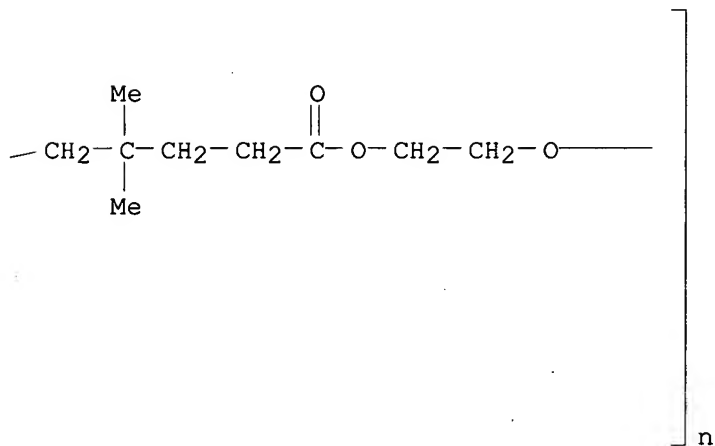
RN 183136-60-9 HCAPLUS

CN Poly[oxy-1,2-ethanediyl]bis[4,4'-bis(4-methylphenyl)imino]-9,9-dimethyl-9H-fluorene(2,2-dimethyl-5-oxo-1,5-pentanediyloxy)] (9CI) (CA INDEX NAME)

PAGE 1-A

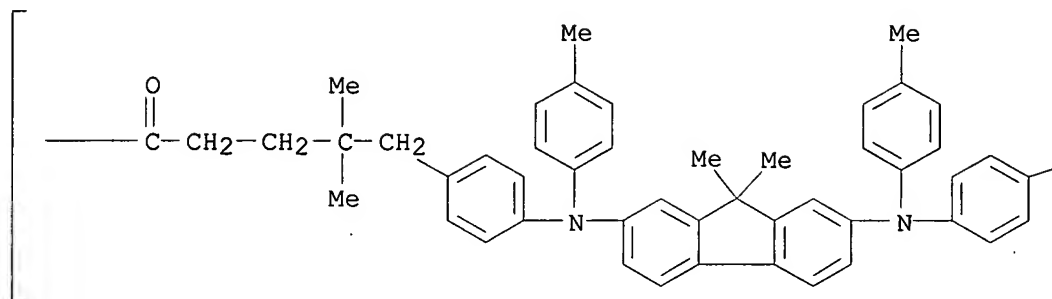


PAGE 1-B

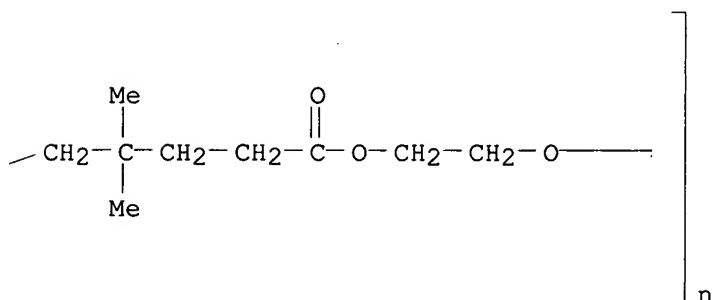


RN 183136-61-0 HCAPLUS
 CN Poly[oxy-1,2-ethanediyl]oxy(4,4-dimethyl-1-oxo-1,5-pentanedioyl)-1,4-phenylene[(4-methylphenyl)imino](9,9-dimethyl-9H-fluorene-2,7-diyl)[(4-methylphenyl)imino]-1,4-phenylene(2,2-dimethyl-5-oxo-1,5-pentanedioyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L82 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1996:294601 HCAPLUS
 DN 124:328419
 TI Hole-transporting material for organic electroluminescence device or
 electrophotographic photoreceptor
 IN Tamano, Michiko; Onikubo, Toshikazu; Uemura, Toshikyuki; Ogawa, Tadashi;
 Enokida, Toshio
 PA Toyo Ink Manufacturing Co., Ltd., Japan.
 SO Eur. Pat. Appl., 34 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 699654	A1	19960306	EP 1995-305450	19950804
	EP 699654	B1	19990331		
	R: DE, FR, GB				
	JP 08227165	A2	19960903	JP 1995-164912	19950630
	JP 3261930	B2	20020304		
	JP 08100038	A2	19960416	JP 1995-171739	19950707
	JP 3296147	B2	20020624		
	US 5681664	A	19971028	US 1995-510535	19950802
PRAI	JP 1994-183198	A	19940804		
	JP 1994-319694	A	19941222		

AB A hole-transporting material of formula H-A-[-B-A-]_n-B-A-H has excellent
 hole-transporting capability and excellent durability, wherein A is a
 specified aromatic amine derivative residue, B is a residue, and n is an
 integer

of 1-5000. The materials may be included in an organic EL device of an electrophotog. photoreceptor which are excellent in stability in continuous long-term use.

IC ICM C07C211-54
ICS C07C217-92; C07C323-36; C07C323-37; C07D211-26; C07D309-14;
C07D335-02; C08G075-02; G03G005-06; G03G005-07

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST hole transporting material EL device; electrophotog photoreceptor hole transporting material

IT Electroluminescent devices
Electrophotographic photoconductors and photoreceptors
(hole transporting material for)

IT 176443-14-4 176443-25-7 176443-27-9 176443-29-1 176443-31-5
176443-32-6 176443-34-8 176443-36-0 176443-38-2 176443-40-6
176443-42-8 176443-43-9 176443-45-1 176443-46-2 176443-47-3
176443-48-4 176443-50-8 176443-51-9 176443-53-1 176443-54-2
176443-56-4 176443-57-5 176443-59-7 176443-60-0 176443-62-2
176443-64-4 176443-66-6 176443-68-8 176443-70-2 176443-72-4
176443-73-5 176443-75-7 176443-77-9 176443-79-1 176443-81-5
176443-83-7

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(hole-transporting material for EL device or electrophotog. photoreceptor)

IT 176443-14-4P 176443-15-5P 176443-16-6P 176443-18-8P 176443-19-9P
176443-21-3P
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(prepared as hole-transporting material for EL device or electrophotog. photoreceptor)

IT 108-94-1, Cyclohexanone, reactions 603-34-9, Triphenylamine 4316-51-2,
4-Methoxytriphenylamine 4316-53-4, 4-Methyltriphenylamine 176443-22-4
176443-23-5

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of hole-transporting material for EL device or electrophotog. photoreceptor)

IT **176443-21-3P**
RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)
(prepared as hole-transporting material for EL device or electrophotog. photoreceptor)

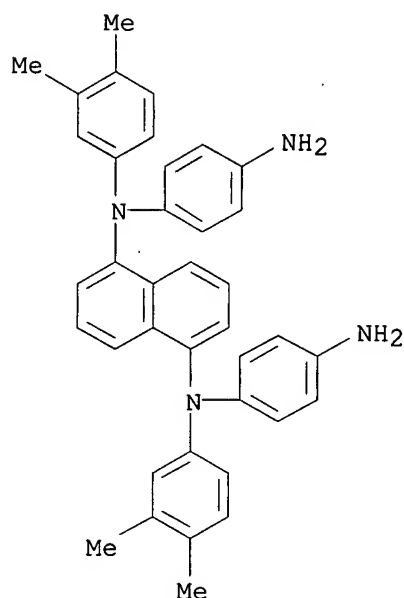
RN 176443-21-3 HCAPLUS

CN Cyclohexanone, 4-methyl-, polymer with N,N'-bis(4-aminophenyl)-N,N'-bis(3,4-dimethylphenyl)-1,5-naphthalenediamine (9CI) (CA INDEX NAME)

CM 1

CRN 176443-20-2

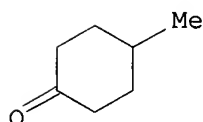
CMF C38 H36 N4



CM 2

CRN 589-92-4

CMF C7 H12 O



L82 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:177628 HCAPLUS
 DN 120:177628
 TI Organic electroluminescent elements
 IN Hosokawa, Chishio; Sakamoto, Hideji; Kusumoto, Tadashi
 PA Idemitsu Kosan Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05247459	A2	19930924	JP 1992-50881	19920309
	JP 3109895	B2	20001120		
PRAI	JP 1992-50881		19920309		

AB The element comprises a polycarbonate containing a repeating unit, Ar1N(Ar5)Ar2G[Ar3N(Ar6)Ar4]p, as a phosphor and/or a hole-injecting layer, wherein the repeating unit contains ≥ 1 electroluminescence-functional tert-amine structure; Ar1-4 = (substituted) C6-20 allylene;

Ar_{5,6} = C₁-6 alkyl; (C₁-10 alkyl- or alkoxy-substituted) C₆-10 aryl; G = single bond, cycloalkylene, C₅-20 allylene, C₆-20 alkylene, O, S; and p = 0 or 1. The element emits a stable luminous blue-violet light.

IC ICM C09K011-06

ICS H05B033-14

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST polycarbonate phosphor hole injector electroluminescence device

IT Electroluminescent devices
(blue-violet emitting)

IT Phosphors
(electroluminescent, blue-violet-emitting, tert amine-containing polycarbonates for)

IT 143155-32-2P 143155-33-3P 143155-40-2P 153560-71-5P 153560-73-7P
153560-75-9P 153560-77-1P **153560-79-3P** 153560-81-7P
153560-82-8P

RL: **PREP (Preparation)**

(prepare and use of, electroluminescent phosphors and/or hole-injecting layers from, violet-blue emitting)

IT **153560-79-3P**

RL: **PREP (Preparation)**

(prepare and use of, electroluminescent phosphors and/or hole-injecting layers from, violet-blue emitting)

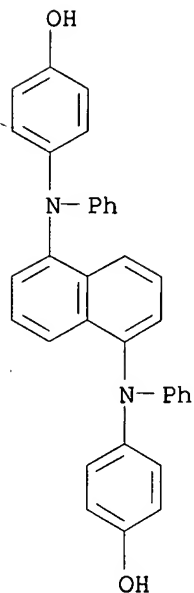
RN 153560-79-3 HCAPLUS

CN Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and 4,4'-[1,5-naphthalenediylbis(phenylimino)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

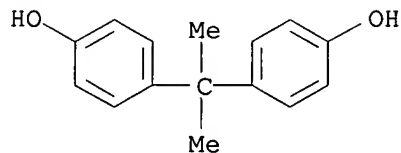
CRN 153560-78-2

CMF C34 H26 N2 O2



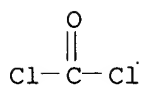
CM 2

CRN .80-05-7
CMF C15 H16 O2



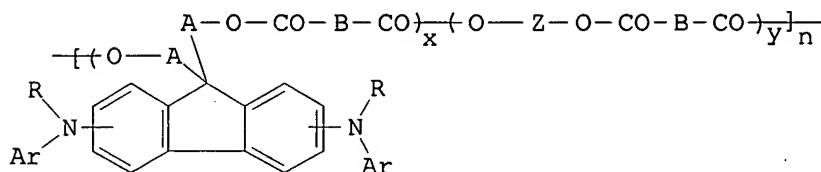
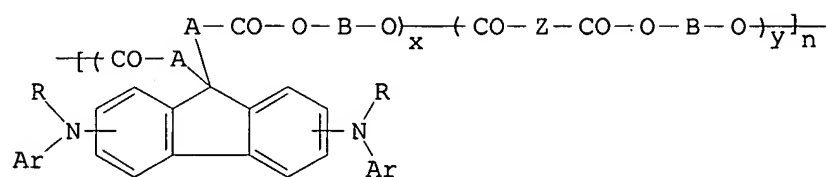
CM 3 .

CRN 75-44-5
CMF C C12 O



L82 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:72244 HCAPLUS
DN 116:72244
TI Photoconductive imaging members with fluorene polyester hole transporting layers
IN Ong, Beng S.; Baranyi, Giuseppa; Alexandru, Lupu
PA Xerox Corp., USA
SO U.S., 15 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 5034296	A	19910723	US 1989-332655	19890403
PRAI	US 1989-332655		19890403		
GI					



AB A layered photoresponsive imaging member is described comprised of a photogenerating layer, and in contact therewith a hole transporting layer comprised of fluorene charge transport polyesters: I and II [A, B, Z = bifunctional groups; R = alkyl or aryl group; Ar = aryl; x and y are mole fractional nos.; $x > 0$, $n + y = 1$ and n represents the number of repeating segments]. A photoconductor containing the above compound has improved cyclic stability and elec. properties.

IC ICM G03G005-047

NCL 430059000

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

ST electrophotog photoconductors fluorene polyester; charge transporting agent fluorene polyester

IT Electrophotographic photoconductors and photoreceptors

(charge-transporting agent for, fluorene group-containing polyester as)

IT 137891-74-8 137891-76-0 137891-78-2 137892-37-6 137892-39-8

137912-27-7 137912-28-8 137941-65-2 137941-70-9 138067-19-3

138067-20-6 138067-21-7 138105-61-0 138626-49-0 138626-58-1

RL: USES (Uses)

(as charge-transporting agent in photoconductor)

IT 137269-26-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and copolymn. of)

IT 4425-95-0P, 9H-Fluorene-9,9-dipropanoic acid 137376-11-5P,

2,7-Diiodo-9,9-bis(2-carboxyethyl)fluorene 137376-12-6P,

2,7-Diiodo-9,9-bis[2-(methoxycarbonyl)ethyl]fluorene 137376-13-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of)

IT 137892-35-4P 137892-40-1P 137912-26-6P

137912-29-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, as charge-transporting agent in photoconductor)

IT 1205-64-7, N-Phenyl-m-toluidine 4425-97-2, 9H-Fluorene-9,9-dipropanenitrile

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of)

IT 137892-35-4P 137892-40-1P 137912-26-6P

137912-29-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, as charge-transporting agent in photoconductor)

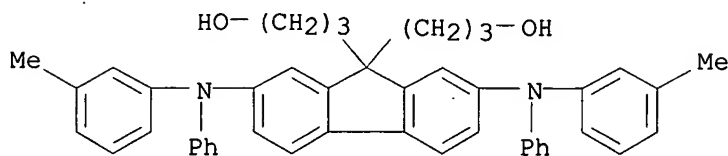
RN 137892-35-4 HCAPLUS

CN Nonanediol dichloride, polymer with 2,7-bis[(3-methylphenyl)phenylamino]-9H-fluorene-9,9-dipropanol (9CI) (CA INDEX NAME)

CM 1

CRN 137269-26-2

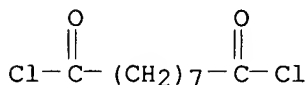
CMF C45 H44 N2 O2



CM 2

CRN 123-98-8

CMF C9 H14 Cl2 O2



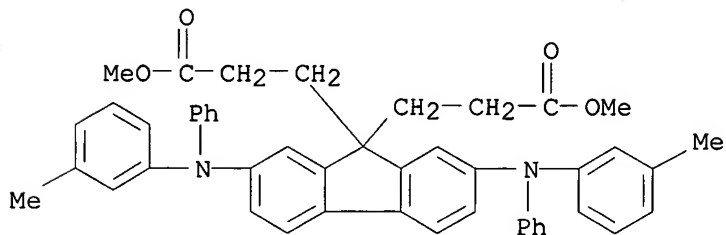
RN 137892-40-1 HCAPLUS

CN 9H-Fluorene-9,9-dipropanoic acid, 2,7-bis[(3-methylphenyl)phenylamino]-, dimethyl ester, polymer with 1,6-hexanediol (9CI) (CA INDEX NAME)

CM 1

CRN 137376-13-7

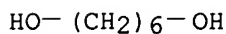
CMF C47 H44 N2 O4



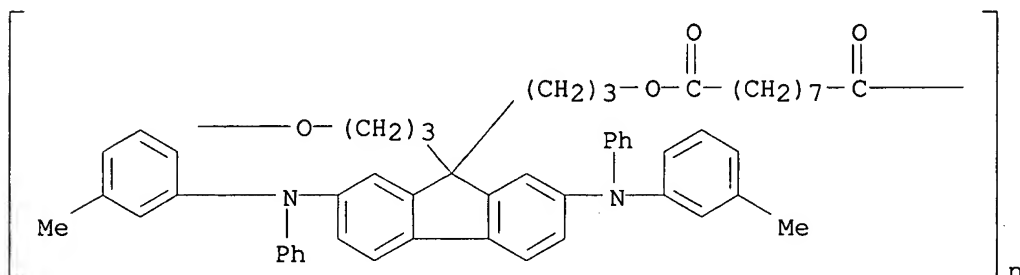
CM 2

CRN 629-11-8

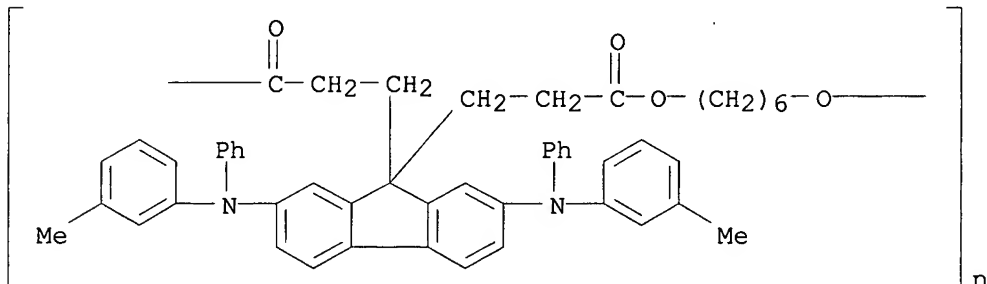
CMF C6 H14 O2



RN 137912-26-6 HCAPLUS
 CN Poly[oxy-1,3-propanediyl[2,7-bis[(3-methylphenyl)phenylamino]-9H-fluoren-9-ylidene]-1,3-propanediyl]oxy(1,9-dioxo-1,9-nonanediyl)] (9CI) (CA INDEX NAME)

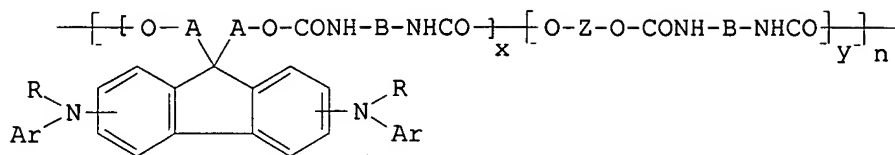


RN 137912-29-9 HCAPLUS
 CN Poly[oxy-1,6-hexanediyl]oxy(1-oxo-1,3-propanediyl)[2,7-bis[(3-methylphenyl)phenylamino]-9H-fluoren-9-ylidene](3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)



L82 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1991:666750 HCAPLUS
 DN 115:266750
 TI Photoconductive imaging members with polyurethane hole transporting layers
 IN Ong, Beng S.; Murti, Dasarao K.; Alexandru, Lupu
 PA Xerox Corp., USA
 SO U.S., 15 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4983482	A	19910108	US 1989-332650	19890403
PRAI	US 1989-332650		19890403		
GI					



I

AB A layered photoresponsive imaging member is described comprising a photogenerating layer, and in contact therewith a hole transporting layer comprised of charge transport polyurethanes I [A,B,Z group of bifunctional linkages; R = alkyl or aryl; Ar = aryl; x and y represent the mole fraction nos. of the polyurethane structural composition units, subject to the provision that $x > 0$ and $x + y = 1$; and n represents the number of repeating segments. An electrostatic imaging method using the above polymethanes is also described. The material is useful in laser scanning imaging.

IC ICM G03G005-14

NCL 430059000

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

ST charge transporting polyurethane photoconductor; electrophotog photoconductor hole transporting

IT Electrophotographic photoconductors

(charge-transporting agent for, polyurethane as)

IT Urethane polymers, uses and miscellaneous

RL: USES (Uses)

(charge-transporting agent in)

IT 137222-33-4 137222-35-6 137222-37-8 137222-39-0 137222-41-4

137222-89-0 137260-80-1 137260-81-2 137260-84-5 137260-85-6

137260-86-7 137304-92-8 137331-50-1 137455-58-4

RL: USES (Uses)

(charge-transporting agent, in photoconductor)

IT 4425-95-0P, 9H-Fluorene-9,9-dipropionic acid 137269-26-2P 137376-11-5P

137376-12-6P 137376-13-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, charge-transporting polyurethane from)

IT 137260-82-3P 137260-83-4P 137269-27-3P 137323-88-7P

137388-35-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, as charge-transporting agent in photoconductor)

IT 137269-27-3P 137323-88-7P 137388-35-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and use of, as charge-transporting agent in photoconductor)

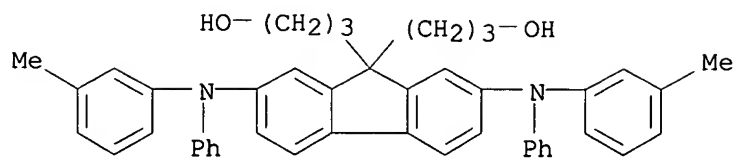
RN 137269-27-3 HCAPLUS

CN 9H-Fluorene-9,9-dipropanol, 2,7-bis[(3-methylphenyl)phenylamino]-, polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

CM 1

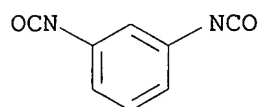
CRN 137269-26-2

CMF C45 H44 N2 O2



CM 2

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

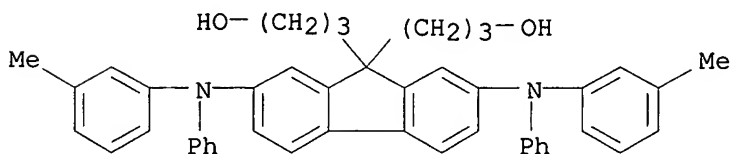


D1-Me

RN 137323-88-7 HCAPLUS
CN 9H-Fluorene-9,9-dipropyl, 2,7-bis[(3-methylphenyl)phenylamino]-, polymer with 1,3-diisocyanatomethylbenzene and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

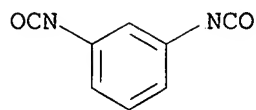
CM 1

CRN 137269-26-2
CMF C45 H44 N2 O2



CM 2

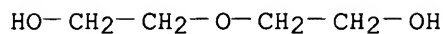
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

CM 3

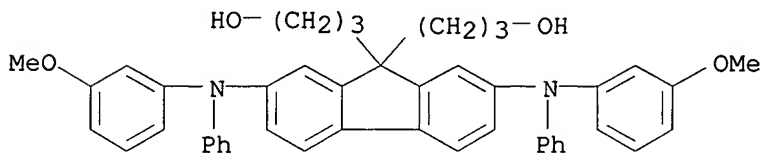
CRN 111-46-6
CMF C4 H10 O3



RN 137388-35-3 HCAPLUS
CN 9H-Fluorene-9,9-dipropanol, 2,7-bis[(3-methoxyphenyl)phenylamino]-,
polymer with 1,3-diisocyanatomethylbenzene (9CI) (CA INDEX NAME)

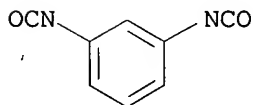
CM 1

CRN 137388-34-2
CMF C45 H44 N2 O4



CM 2

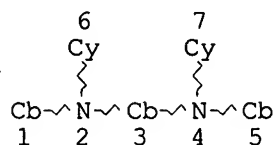
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

=> => d que

L73 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS PCY UNS AT 3

GGCAT IS UNS AT 6

GGCAT IS UNS AT 7

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L75 SCR 1842

L77 SCR 2043

L79 123 SEA FILE=REGISTRY SSS FUL L73 AND L75 AND L77

L80 114 SEA FILE=REGISTRY ABB=ON L79 NOT 1-10/SI

L81 40 SEA FILE=HCAPLUS ABB=ON L80

L82 24 SEA FILE=HCAPLUS ABB=ON L81(L) PREP/RL

L85 16 SEA FILE=HCAPLUS ABB=ON L81 NOT L82

=> d l85 bib abs hitind 1-16

L85 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:878597 HCAPLUS

DN 141:368412

TI Composite structure

IN Durrant, James Robert; Haque, Saif Ahmed; Holmes, Andrew; Park, Taiho

PA Imperial College Innovations Ltd., UK; Cambridge University Technical Services Ltd.

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004090921	A2	20041021	WO 2004-GB1467	20040402
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI GB 2003-7975 A 20030405

AB A composite structure comprises a dual-function material intermediate, a

*16 remaining
CA references which
were not preparations*

conducting material, and a semiconductor. The dual-function material comprises an organic material and at least one ionic species such that the organic material has both electronic charge transport properties and supports or chelates at least one ionic species. The conducting material comprises an ohmic conductor, a semiconducting material or an ionic conductor. The composite structures are suitable for use in electrochem. devices such as photovoltaic cells, photodiodes, batteries, electrodes, electrochromic devices and light-emitting diodes.

IC ICM H01G009-20

ICS H01L051-20; H01L051-30

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38, 72, 76

IT 135-48-8, Pentacene 147-14-8, Copper phthalocyanin 198-55-0, Perylene 1313-96-8, Niobium oxide (Nb₂O₅) 1314-13-2, Zinc oxide (ZnO), uses 1314-35-8, Tungsten oxide (WO₃), uses 1314-61-0, Tantalum oxide (Ta₂O₅) 7782-42-5, Graphite, uses 13463-67-7, Titania, uses 21651-19-4, Tin oxide (SnO) 25322-68-3, Carbowax 20000 90076-65-6, Lithium triflimide 141460-19-7 207739-72-8 **771563-22-5**

RL: MOA (Modifier or additive use); USES (Uses)

(composite structure containing conductive organic species)

structures follow, listed by title + number

L85 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:871298 HCAPLUS

DN 141:357790

TI Organic electroluminescent (EL) device with excellent durability, light emission efficiency, and high luminance

IN Mishima, Masayuki

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004296407	A2	20041021	JP 2003-90713	20030328
PRAI	JP 2003-90713		20030328		

AB The organic EL device contains, between a pair of electrodes, an organic layer containing ≥ 1 light-emitting layers involving a layer containing a phosphorescent compound and a host compound selected from those represented by general formulas OAr₁N(Ar₃)Ar₂N(Ar₃)Ar₁OAr₄XAr₅ (Ar₁, Ar₂, Ar₄, Ar₅ = divalent aromatic group; Ar₃ = monovalent aromatic group; X = single bond, sulfone, carbonyl, alkylene) and/or OAr₆N(Ar₈NAr₇)Ar₆OAr₉YAr₁₀ (Ar₆, Ar₈, Ar₉, Ar₁₀ = divalent aromatic group; Ar₇ = aromatic group; Y = sulfone, carbonyl, alkylene) and optionally electron-withdrawing compds. The organic EL device is useful for a full-color display, a back light, a surface-emitting light source, a light source array for a printer, etc.

IC ICM H05B033-14

ICS C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 173394-18-8 292624-96-5 292624-99-8 366001-69-6 389104-48-7
409084-62-4 **777092-37-2** **777092-42-9** 777092-53-2
777092-58-7 777092-64-5 **777092-72-5**

RL: DEV (Device component use); USES (Uses)

(host; organic EL device with excellent durability, light emission efficiency, and high luminance, containing phosphorescent compound and diamine polymer hosts)

L85 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:530235 HCAPLUS

DN 141:79279

TI Electrophotographic photoreceptor using polyamine charge-transporting agent, process cartridge, and image forming apparatus

IN Takatani, Itaru; Kawahara, Masataka; Tanaka, Takakazu; Ogaki, Harunobu; Nakajima, Yuka

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004184569	A2	20040702	JP 2002-349402	20021202
PRAI	JP 2002-349402		20021202		
OS	MARPAT 141:79279				

AB The photoreceptor has a photosensitive layer containing a polymer charge-transporting agent with a repeated structural unit $\text{NAr11Ar13NAr12Ar14}$ [Ar11, Ar12 = bivalent group with aromatic hydrocarbon cyclic or aromatic heterocyclic group; Ar13, Ar14 = (un)substituted monovalent aromatic hydrocarbon or heterocyclic group; $n \geq 3$], in which the surface is exposed by a monochromatic light source with 400-410 nm wavelength. The process cartridge removably incorporated in the apparatus, involves the obtained photoreceptor and ≥ 1 of charging, developing, transferring, and cleaning devices. The apparatus has an exposing device with the above light source. The photoreceptor shows high sensitivity and improved abrasion resistance, mech. strength, and stability in repeated use.

IC ICM G03G005-07

ICS B41J002-44; G03G005-06; G03G005-147; G03G015-04

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 618108-75-1, Poly[2,6-pyridinediyl(phenylimino)] 713110-42-0
713110-43-1 713110-44-2 713110-45-3 713110-46-4 713110-47-5
713110-48-6 713110-49-7 713110-50-0 713110-51-1 713110-52-2
713110-53-3 713110-54-4 713110-55-5 713110-56-6 713110-57-7
713110-58-8 713110-59-9

RL: DEV (Device component use); USES (Uses)

(electrophotog. photoreceptor using polymer charge-transporting agent)

L85 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:291722 HCAPLUS

DN 140:329315

TI Organic electroluminescent device

IN Hirose, Eiichi; Okuda, Daisuke; Seki, Mieko; Ozaki, Tadayoshi; Yoneyama, Hiroto; Ishii, Toru; Agata, Takeshi; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 140 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004111206	A2	20040408	JP 2002-271831	20020918
	US 2004081854	A1	20040429	US 2003-389947	20030318

PRAI JP 2002-271831 A 20020918

AB The invention relates to an organic electroluminescent device, suited for use in making an optical display, a backlight of LCD, an illumination apparatus, etc., comprising a fluorescent moiety-terminated nonconjugated polymer, i.e. a fluorescent moiety-terminated polyester, polyether, and polyurethane that contain the partial structure represented by $-(T)_j(O)_i-C_6H_4-N(Ar)X-[N(Ar)-C_6H_4]_k-(O)_i(T)_j-$ and $-(T)_j(O)_i-(C_6H_4)_2-N(Ar)X-[N(Ar)-(C_6H_4)_2]_k-(O)_i(T)_j-$ [Ar = Ph, polynuclear aromatic hydrocarbon, condensed aromatic hydrocarbon and aromatic heterocyclic groups; X = phenylene, divalent polynuclear aromatic hydrocarbon, divalent condensed aromatic hydrocarbon, and divalent aromatic heterocyclic groups; T = C1-6 normal chain hydrocarbon and C2-10 hydrocarbon groups; k, i, and j = 0 and 1].

IC ICM H05B033-14

ICS C09K011-06

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 36, 74

IT 2085-33-8, Alq3 15082-28-7 19053-14-6D, fluorescent moiety-terminated 184583-58-2 188541-07-3 371771-76-5 371771-76-5D, fluorescent moiety-terminated 455952-15-5 455952-15-5D, fluorescent moiety-terminated 473799-92-7 **678195-29-4** 678195-30-7 **678195-31-8**

RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)

L85 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:250284 HCAPLUS

DN 140:294709

TI Electrophotographic photoreceptor and its use in process cartridge and electrophotographic apparatus

IN Hirano, Hidetoshi; Yoshida, Akira; Tanaka, Takakazu; Ogaki, Harunobu; Nakajima, Yuka

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004093794	A2	20040325	JP 2002-253613	20020830
PRAI	JP 2002-253613		20020830		

AB The photoreceptor successively has a support, a charge-generating layer, a primary charge-transporting layer containing charge-transporting polymers having weight-average mol. weight 1500-20,000, and a secondary charge-transporting

layer preferably containing polyarylates. The photoreceptor surface layer has improved wear resistance, durability, memory characteristics, and solvent crack resistance.

IC ICM G03G005-047

ICS G03G005-05; G03G005-06; G03G005-147

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 217310-92-4 **622852-14-6** **675869-10-0** 675869-11-1
675869-12-2 675869-13-3 675869-14-4

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(primary charge-transporting layer containing; electrophotog. photoreceptor

using charge-transporting polymers for process cartridge and electrophotog. apparatus)

L85 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:219376 HCAPLUS

DN 140:278200

TI Organic electroluminescent device

IN Ishii, Toru; Okuda, Daisuke; Seki, Mieko; Yoneyama, Hiroto; Hirose, Eiichi; Ozaki, Tadayoshi; Agata, Takeshi; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 46 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004087395	A2	20040318	JP 2002-249234	20020828
PRAI	JP 2002-249234		20020828		
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to an organic electroluminescent device comprising the charge transporting polyether containing the partial structure represented by I and II [X = divalent aromatic group; T = C1-6 divalent linear chain hydrocarbon and C2-10 divalent branched hydrocarbon groups; R1 = C1-10 hydrocarbon and aromatic groups; R2 = H, C1-10 hydrocarbon, C1-4 alkoxy, cyano, etc.; and k = 0 or 1].

IC ICM H05B033-14

ICS C09K011-06; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 37, 74

IT 672939-18-3 672939-20-7 672939-21-8 672939-23-0 672939-24-1
672939-26-3 **672939-27-4 672939-29-6**
672939-30-9 672939-32-1 672939-33-2 672939-35-4
672939-36-5 672939-38-7 672939-41-2

RL: DEV (Device component use); USES (Uses)

(organic electroluminescent device comprising charge transporting polyether)

L85 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:219375 HCAPLUS

DN 140:278199

TI Organic electroluminescent device

IN Ishii, Toru; Okuda, Daisuke; Seki, Mieko; Yoneyama, Hiroto; Hirose, Eiichi; Ozaki, Tadayoshi; Agata, Takashi; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 52 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004087393	A2	20040318	JP 2002-249194	20020828
PRAI	JP 2002-249194		20020828		
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to an organic electroluminescent device comprising the charge transporting polyurethane containing the partial structure represented by I and II [X = divalent aromatic group; T = C1-6 divalent linear chain hydrocarbon and C2-10 divalent branched hydrocarbon groups; R1 = C1-10 hydrocarbon and aromatic groups; R2 = H, C1-10 hydrocarbon, C1-4 alkoxy, cyano, etc.; and k = 0 or 1].

IC ICM H05B033-14
ICS C08G018-38; C09K011-06; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 37, 74

IT 672937-83-6 672937-84-7 **672937-85-8** 672937-86-9
672937-87-0 **672937-89-2**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device comprising charge transporting polyurethane)

L85 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:77079 HCAPLUS

DN 140:136192

TI Organic electroluminescent device

IN Hirose, Eiichi; Yoneyama, Hiroto; Okuda, Daisuke; Seki, Mieko; Ozaki, Tadayoshi; Agata, Takashi; Ishii, Toru; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004030942	A2	20040129	JP 2002-181030	20020621
PRAI	JP 2002-181030		20020621		

AB The invention relates to an organic electroluminescent device comprising the charge transporting polyether represented by R-O-[A-O]p-R, [R = H, alkyl, aryl, and aralkyl; A = -TmC6H4N(Ar)X[N(Ar)C6H4]kTm- and -TmC6H4-C6H4N(Ar)X[N(Ar)C6H4-C6H4]kTm- [X = phenylene, monovalent polycyclic aroms., monovalent condensed aromatic hydrocarbon, and monovalent aromatic heterocyclic; T = divalent hydrocarbon chain (C1-6), and divalent branched hydrocarbon (C2-10); m = 0-3 integer, k = 0 or 1; Ar = Ar1R1C:C(R3)[Ar2C(R3):C(R4)]nAr3- and Ar1CC[Ar2CC]n-Ar3- [Ar1 = Ph, monovalent polycyclic aroms. hydrocarbon, etc.; Ar2-4 = phenylene, divalent polycyclic aromatic hydrocarbon, etc.; and R1-4 = H, alkyl, cyano, etc.; n = 0-10 integer]]; p = 5-5,000 integer].

IC ICM H05B033-14

ICS C09K011-06; H05B033-22

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 38

IT 651048-26-9 651048-27-0 651048-28-1 **651048-29-2**
651048-30-5 651048-31-6 651048-32-7

RL: DEV (Device component use); USES (Uses)

(charge transporting material for organic electroluminescent device)

L85 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:868627 HCAPLUS

DN 139:371790

TI Electrophotographic photoreceptor containing charge-transporting polymer and low molecular weight substance in photosensitive layer, process cartridge, and electrophotographic apparatus

IN Nakajima, Yuka; Tanaka, Takakazu; Ogaki, Harunobu

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003316044	A2	20031106	JP 2002-126263	20020426
PRAI	JP 2002-126263		20020426		

OS MARPAT 139:371790

AB The electrophotog. photoreceptor comprises a photosensitive layer formed on a support, wherein the photosensitive layer contains a charge-transporting polymer represented by [NAr13-Ar11(NAr14-Ar12)a]b (Ar11,12 = divalent group; Ar13,14 = aromatic ring, heterocyclyl; a, b = ≥ 1 integer; and $a + b \geq 5$) and a low mol. weight charge-transporting substance with a mol. weight 300-600. The electrophotog. photoreceptor exhibited resistance in scratch resistance and discharge resistance.

IC ICM G03G005-07

ICS G03G005-05; G03G005-06; G03G005-147

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT **622852-14-6** **622852-15-7** 622852-16-8 622852-17-9
622852-18-0

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(electrophotog. photoreceptor containing charge-transporting polymer and low. mol. weight compound in photosensitive layer)

L85 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:715941 HCAPLUS

DN 139:252274

TI Organic electroluminescent device comprising electron transporting polyether

IN Hirose, Eiichi; Seki, Mieko; Yoneyama, Hiroto; Okuda, Daisuke; Ozaki, Tadayoshi; Agata, Takashi; Ishii, Toru; Mashimo, Kiyokazu; Sato, Katsuhiro

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003257669	A2	20030912	JP 2002-60558	20020306

US 2004018384 A1 20040129 US 2003-377672 20030304
PRAI JP 2002-60558 A 20020306
AB The invention refers to an electroluminescent device comprising the structure -Tm-C6H4-N(Ar)-X[N(Ar)-C6H4]k-Tm- or -Tm-C6H4-C6H4-N(Ar)X[N(Ar)-C6H4-C6H4]k-Tm- [Ar = (un) substituted benzene, univalent multinuclear aromatic hydrocarbon, univalent condensed aromatic hydrocarbon, or univalent heterocycle; X = (un)substituted divalent multinuclear aromatic hydrocarbon, divalent condensed aromatic hydrocarbon, divalent multinuclear heterocycle, divalent multinuclear aromatic hydrocarbon containing a heterocycle, or unsubstituted divalent condensed aromatic hydrocarbon containing a heterocycle; T = C1-6 divalent straight chain or C2-10 branched hydrocarbon; m = 1 - 3; k = 0, 1] of an electron transport polyether in at least one of the organic layers.
IC ICM H05B033-14
ICS C09K011-06; H05B033-22
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT 597550-98-6 597550-99-7 597551-00-3
597551-01-4 597551-02-5 597551-03-6
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device comprising electron transporting polyether)
L85 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:872871 HCAPLUS
DN 138:90348
TI End-group analysis of blue light-emitting polymers using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry
AU Chen, Hui; He, Meiyu; Pei, Jian; Liu, Bin
CS Department of Chemistry, Peking University, Beijing, 100871, Peop. Rep. China
SO Analytical Chemistry (2002), 74(24), 6252-6258
CODEN: ANCHAM; ISSN: 0003-2700
PB American Chemical Society
DT Journal
LA English
AB An anal. method based on matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) has been applied to provide information on the structure of a copolymer, e.g., repeat unit and end group. Seven conjugated polymers, which have been demonstrated as the active component in blue light-emitting diodes, were synthesized through Suzuki polycondensation reaction in the presence of Pd(PPh3)4 catalyst. Their mol. wts. were obtained using gel permeation chromatog. anal. MALDI-TOF MS was used to investigate the structure information in detail. The proposed end-group structures were confirmed by the identity between the observed and the simulated isotopic distribution of each polymer. The results demonstrate that these synthetic polymers possess various end groups and even contain macrocycles. The catalyst Pd(PPh3)4 was found to introduce Ph end groups via aryl-aryl exchange between the catalytic palladium intermediate and the triphenylphosphine ligand. All these results are based on the anal. of the mass spectrum data, which suggests that MALDI-TOF MS is an extraordinarily strong tool in synthetic polymer structure anal.
CC 36-4 (Physical Properties of Synthetic High Polymers)
IT 133019-09-7, Poly(9,9-dihexyl-9H-fluorene-2,7-diyl) 244036-31-5
297153-10-7 353246-72-7 353246-74-9 484032-90-8 484032-91-9
484064-85-9 484064-86-0
RL: PRP (Properties)

(end-group anal. of blue light-emitting polymers using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L85 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:99089 HCAPLUS

DN 136:158778

TI Electrophotographic photoreceptor containing halide and positive hole-transporting compound polymer

IN Kikuchi, Norihiro; Taichi, Atsushi; Uematsu, Hironori; Tanaka, Hiroyuki; Sekiya, Michiyo; Amanomiya, Shoji

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 61 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002040686	A2	20020206	JP 2000-222194	20000724
PRAI	JP 2000-222194		20000724		

OS MARPAT 136:158778

AB The electrophotog. photoreceptor comprises a photosensitive layer formed on a support, wherein the photosensitive layer contains a pos. hole-transporting compound polymer having ≥ 2 polymerizable groups and ≥ 1 halide selected from R1R2R3X1C and Ar1-X2 (R1-3 = H, halo, alkyl, alkoxy, aryloxy, aralkyl, aryl; X1,2 = halogen). A process cartridge and an electrophotog. apparatus are also claimed.

IC ICM G03G005-05

ICS C08K005-02; C08L101-12; G03G005-07

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 268222-41-9 344449-41-8 **344449-50-9** 346619-53-2
395084-46-5 395084-47-6 395084-49-8 395084-51-2 395084-53-4
395084-55-6 395084-57-8 395084-59-0

RL: TEM (Technical or engineered material use); USES (Uses)

(pos. hole-transporting compound polymer in electrophotog. photoreceptor)

L85 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:356740 HCAPLUS

DN 132:354713

TI Electrophotographic photoconductor, process cartridge, and electrophotographic apparatus

IN Maruyama, Akio; Uematsu, Hironori; Kikuchi, Norihiro; Amanomiya, Shoji; Sekiya, Michiyo

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 112 pp.

CODEN: JKXXAF

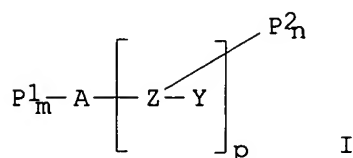
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000147804	A2	20000526	JP 1998-322741	19981113
PRAI	JP 1998-322741		19981113		

GI



AB The electrophotog. photoconductor contains a pos. hole transport substance containing chain polymerizable groups and/or its cured product. The pos. hole transport substance is represented by general formula I (A = pos. hole transport group; P1, P2 = chain polymerizable group; Z = organic group; Y = H; m, p, n ≥ 0). The electrophotog. photoconductor shows excellent charging stability for an extended usage.

IC ICM G03G005-06

ICS G03G005-06; G03G005-07

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 268222-38-4 268222-47-5 268222-60-2 268222-61-3 268222-82-8

268223-02-5 269402-73-5 269402-86-0 269402-87-1 269402-89-3

269402-93-9 269402-97-3 269403-01-2 269403-03-4 269403-05-6

269403-12-5 **269411-28-1**

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(polymerized pos. hole transport substance in electrophotog. photoconductor)

L85 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:328723 HCAPLUS

DN 126:310428

TI Electrophotographic photoreceptor using random copolymerized charge-transporting polyester

IN Nukada, Katsumi; Iwasaki, Masahiro

PA Fuji Xerox Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 09062019	A2	19970307	JP 1995-239057	19950825
	JP 3422140	B2	20030630		
	US 5731118	A	19980324	US 1996-701663	19960822
PRAI	JP 1995-239057	A	19950825		
	JP 1995-239058	A	19950825		
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The electrophotog. photoreceptor contains a charge-transporting polyester containing structural repeating unit I or II (R1-4 = H, alkyl, alkoxy,

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

substituted amino, halo, aryl; X = divalent aromatic group; T = C1-10 divalent hydrocarbon; m, n = 0, 1) and dicarboxylic acid component O-CO-Z-CO-O (Z = divalent hydrocarbon).

IC ICM G03G005-07

ICS C08G063-685

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 189150-17-2 189150-24-1, Adipic acid-1,3-propanediol-4,4'-

biphenyldicarboxylic acid copolymer 189150-30-9 189150-36-5

189150-42-3 189150-47-8 189150-55-8 189150-59-2 189150-63-8

189150-69-4 **189150-73-0** 189150-76-3 189150-80-9

RL: DEV (Device component use); USES (Uses)

(charge-transporting polyester for electrophotog. photoreceptor)

L85 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:428418 HCAPLUS

DN 125:100043

TI Charge-transporting polymer, process for producing the same, and organic electronic device containing the same

IN Iwasaki, Masahiro; Imai, Akira; Nukada, Katsumi; Sato, Katsuhiko

PA Fuji Xerox Co., Ltd., Japan

SO Eur. Pat. Appl., 42 pp.

CODEN: EPXXDW

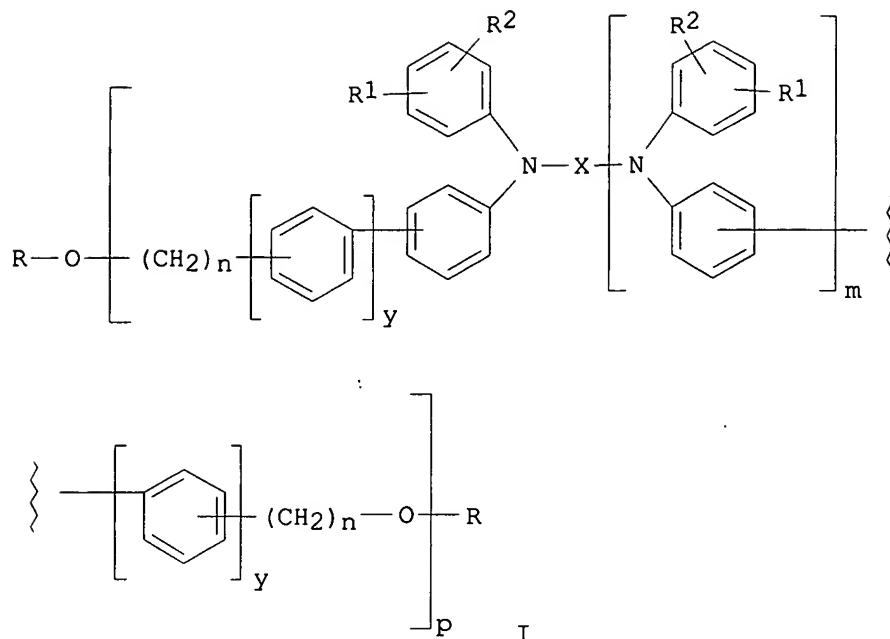
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 710893	A1	19960508	EP 1995-116439	19951018
	EP 710893	B1	20000823		
	R: DE, FR, GB				
	JP 08176293	A2	19960709	JP 1995-268265	19951017
	JP 2894257	B2	19990524		
	US 5639581	A	19970617	US 1995-543913	19951017
	US 5734003	A	19980331	US 1996-763887	19961211
PRAI	JP 1994-282485	A	19941024		
	JP 1995-268265	A	19951017		
	US 1995-543913	A3	19951017		

GI



AB A charge-transporting polymer represented by formula I wherein R represents a hydrogen atom, an alkyl group, an acyl group or -CONHR₃ wherein R₃ represents an alkyl group or a substituted or unsubstituted aryl group; R₁ and R₂, which may be the same or different, each represents a hydrogen atom, an alkyl group, an alkoxy group, a substituted amino group, a halogen atom, or a substituted or unsubstituted aryl group; X represents a substituted or unsubstituted divalent aromatic group; y represents 0 or 1; m represents 0 or 1; n represents an integer of 1 to 5; and p represents an integer of 5 to 5000, a process for producing the same, and an organic electron device containing the same, such as an electrophotog. photoreceptor, are disclosed. The charge-transporting polymer is excellent in solubility, film-forming properties, mech. strength, pos. hole mobility, and stability to repeated use.

IC ICM G03G005-07

ICS C08G065-38

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 178611-67-1 178611-73-9 178611-74-0 **178611-78-4**

178611-80-8 178611-82-0 **178611-84-2**

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(charge-transporting agent for electrophotog. photoreceptor)

L85 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:921945 HCAPLUS

DN 123:325717

TI Electrophotographic imaging method

IN Mashita, Kyokazu; Kojima, Fumio; Kobayashi, Tomoo; Okano, Sadao; Nukada, Katsumi; Imai, Akira; Igarashi, Ryosaku

PA Fuji Xerox Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07199503	A2	19950804	JP 1994-11370	19940107
PRAI	JP 1994-11370		19940107		

AB In the title electrophotog. imaging method, a photoreceptor which comprises on its elec. conductive support a photosensitive layer containing a polymeric charge-transporting material is utilized, and charging of the photoreceptor is effected by an elec. conductive material which is pressed against the photoreceptor and to which an elec. voltage is applied.

IC ICM G03G005-07

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 170368-47-5 170368-48-6 170368-51-1 170368-52-2 170368-53-3
 170368-54-4 **170368-55-5 170368-57-7**
170368-59-9

RL: DEV (Device component use); USES (Uses)

(polymeric charge-transporting material for electrophotog. photoreceptor)

=> d 185 ti hitstr 1-16

L85 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Composite structure

IT 771563-22-5

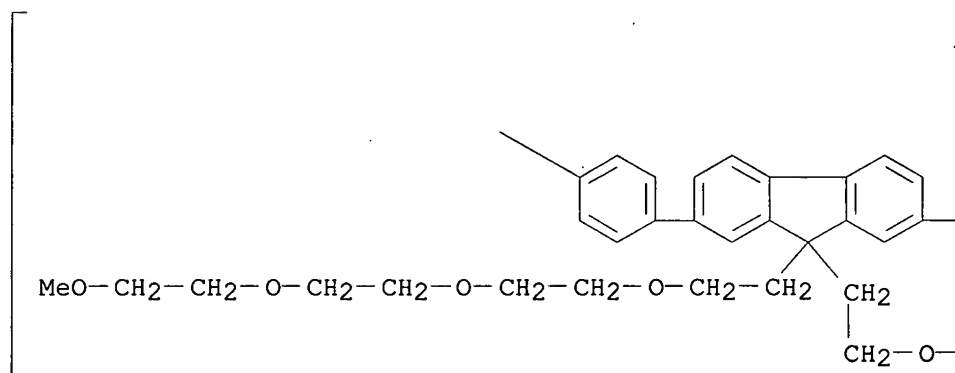
RL: MOA (Modifier or additive use); USES (Uses)

(composite structure containing conductive organic species)

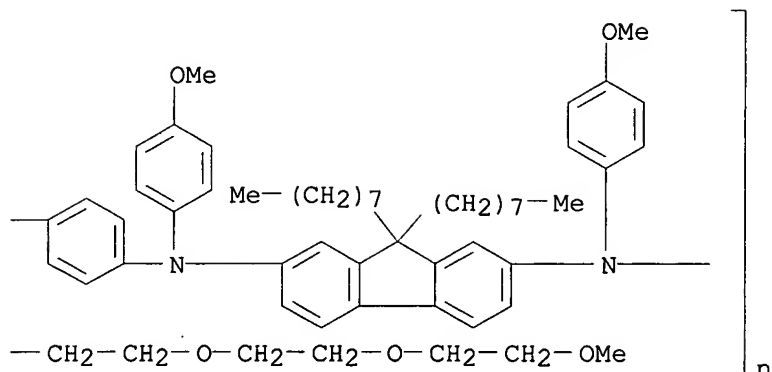
RN 771563-22-5 HCAPLUS

CN Poly[[(4-methoxyphenyl)imino] (9,9-dioctyl-9H-fluorene-2,7-diyl) [(4-methoxyphenyl)imino]-1,4-phenylene[9,9-bis(3,6,9,12-tetraoxatridec-1-yl)-9H-fluorene-2,7-diyl]-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L85 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Organic electroluminescent (EL) device with excellent durability, light emission efficiency, and high luminance

IT 777092-37-2 777092-42-9 777092-72-5

RL: DEV (Device component use); USES (Uses)

(host; organic EL device with excellent durability, light emission efficiency, and high luminance, containing phosphorescent compound and diamine polymer hosts)

RN 777092-37-2 HCAPLUS

CN Poly[oxy-1,4-phenylenesulfonyl-1,4-phenyleneoxy-1,4-phenylene[(3-methylphenyl)imino]-1,4-naphthalenediyl[(3-methylphenyl)imino]-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 777092-42-9 HCAPLUS

CN Poly[oxy-1,4-phenylenesulfonyl-1,4-phenyleneoxy-1,4-phenylene[(4-methoxyphenyl)imino]-9,10-anthracenediyl[(4-methoxyphenyl)imino]-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

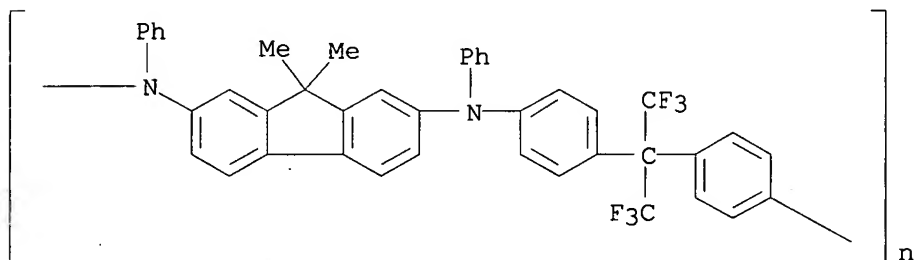
RN 777092-72-5 HCAPLUS

CN Poly[oxy-1,4-phenylene[[4-(diphenylamino)-1-naphthalenyl]imino]-1,4-phenyleneoxy-9,10-anthracenediylcarbonyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

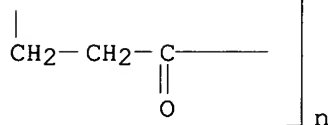
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

L85 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoreceptor using polyamine charge-transporting agent, process cartridge, and image forming apparatus
 IT 713110-58-8
 RL: DEV (Device component use); USES (Uses)
 (electrophotog. photoreceptor using polymer charge-transporting agent)
 RN 713110-58-8 HCAPLUS
 CN Poly[(phenylimino)(9,9-dimethyl-9H-fluorene-2,7-diyl)(phenylimino)-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylene] (9CI) (CA INDEX NAME)



L85 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Organic electroluminescent device
 IT 678195-29-4 678195-31-8
 RL: DEV (Device component use); USES (Uses)
 (organic electroluminescent device)
 RN 678195-29-4 HCAPLUS
 CN Poly[oxy-1,2-ethanediyl oxy(1-oxo-1,3-propanediyl)-1,4-phenylene[(4-methoxyphenyl)imino]-9,10-anthracenediyl[(4-methoxyphenyl)imino]-1,4-phenylene(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

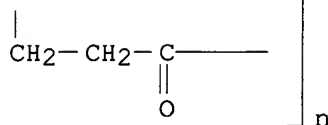


PAGE 2-A

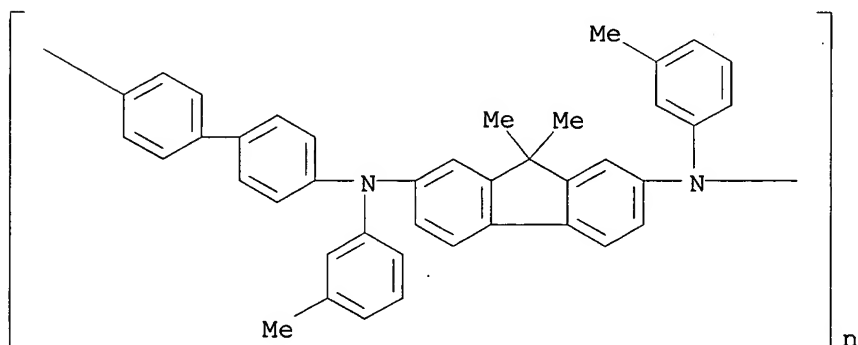
RN 678195-31-8 HCAPLUS
 CN Poly[oxy-1,2-ethanediyl oxy(1-oxo-1,3-propanediyl)-1,4-phenylene(phenylimino)-1,4-naphthalenediyl(phenylimino)-1,4-phenylene(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

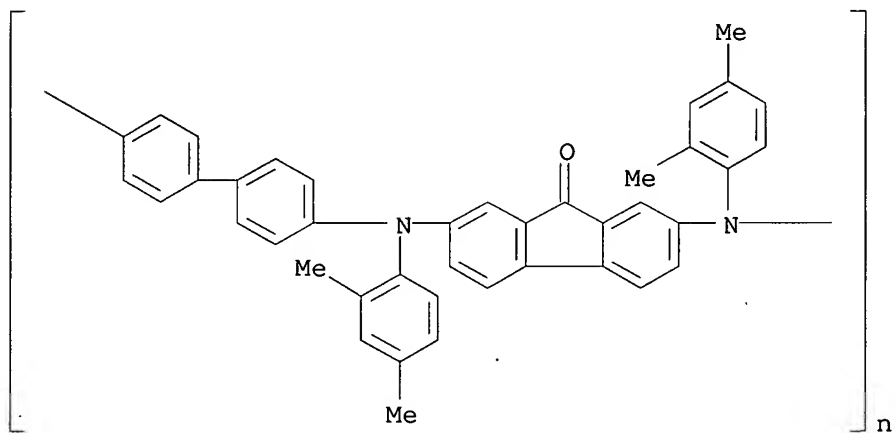
PAGE 2-A



L85 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoreceptor and its use in process cartridge and electrophotographic apparatus
 IT 622852-14-6 675869-10-0
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (primary charge-transporting layer containing; electrophotog. photoreceptor using charge-transporting polymers for process cartridge and electrophotog. apparatus)
 RN 622852-14-6 HCAPLUS
 CN Poly[[(3-methylphenyl)imino] (9,9-dimethyl-9H-fluorene-2,7-diyl) [(3-methylphenyl)imino] [1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 675869-10-0 HCAPLUS
 CN Poly[[(2,4-dimethylphenyl)imino](9-oxo-9H-fluorene-2,7-diyl)[(2,4-dimethylphenyl)imino][1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



L85 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

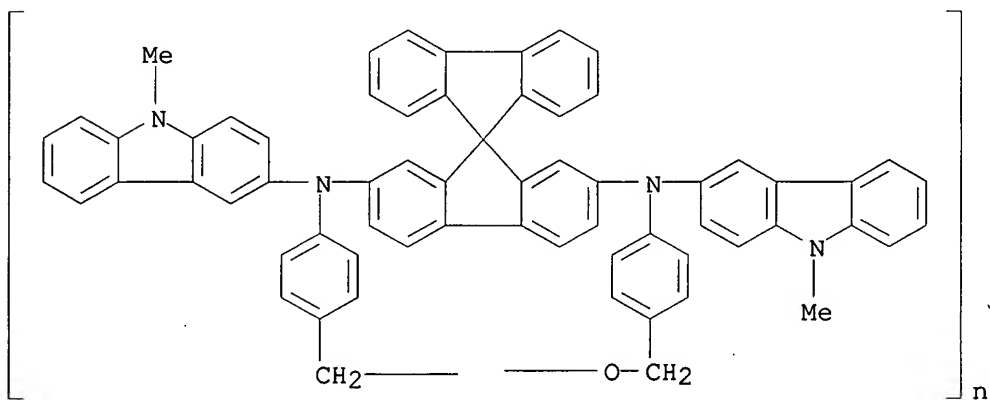
TI Organic electroluminescent device

IT 672939-27-4 672939-29-6 672939-30-9
 672939-32-1 672939-36-5 672939-38-7
 672939-41-2

RL: DEV (Device component use); USES (Uses)
 (organic electroluminescent device comprising charge transporting polyether)

RN 672939-27-4 HCAPLUS

CN Poly[oxymethylene-1,4-phenylene[(9-methyl-9H-carbazol-3-yl)imino]-9,9'-spirobi[9H-fluorene]-2,7-diyl[(9-methyl-9H-carbazol-3-yl)imino]-1,4-phenylenemethylene] (9CI) (CA INDEX NAME)

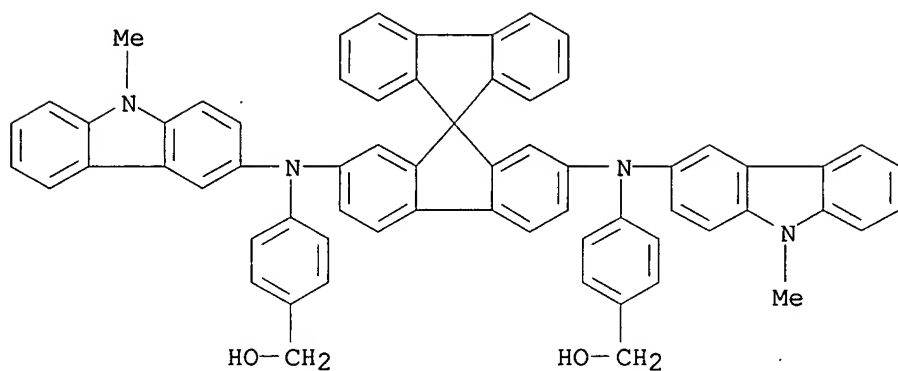


RN 672939-29-6 HCAPLUS

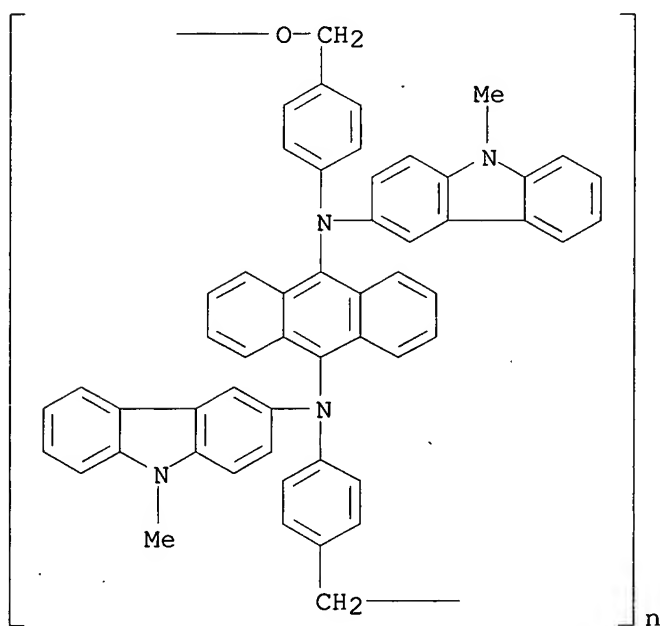
CN Benzenemethanol, 4,4'-[9,9'-spirobi[9H-fluorene]-2,7-diylbis[(9-methyl-9H-carbazol-3-yl)imino]]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 672939-28-5
CMF C65 H48 N4 O2



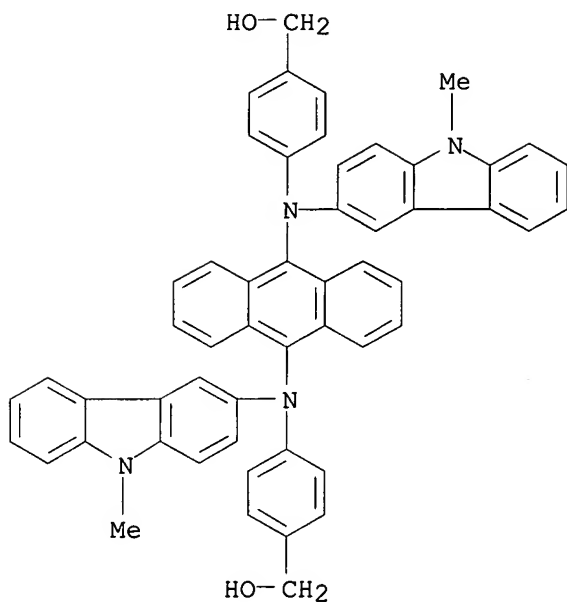
RN 672939-30-9 HCAPLUS
CN Poly[oxyethylene-1,4-phenylene[(9-methyl-9H-carbazol-3-yl)imino]-9,10-anthracenediyl[(9-methyl-9H-carbazol-3-yl)imino]-1,4-phenylenemethylene] (9CI) (CA INDEX NAME)



RN 672939-32-1 HCAPLUS
CN Benzenemethanol, 4,4'-[9,10-anthracenediylbis[(9-methyl-9H-carbazol-3-yl)imino]]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 672939-31-0
CMF C54 H42 N4 O2



RN 672939-36-5 HCAPLUS
 CN Poly[oxyethylene[1,1'-biphenyl]-4,4'-diyl[(9-methyl-9H-carbazol-3-yl)imino]-9,10-anthracenediyl[(9-methyl-9H-carbazol-3-yl)imino][1,1'-biphenyl]-4,4'-diylmethylenes] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

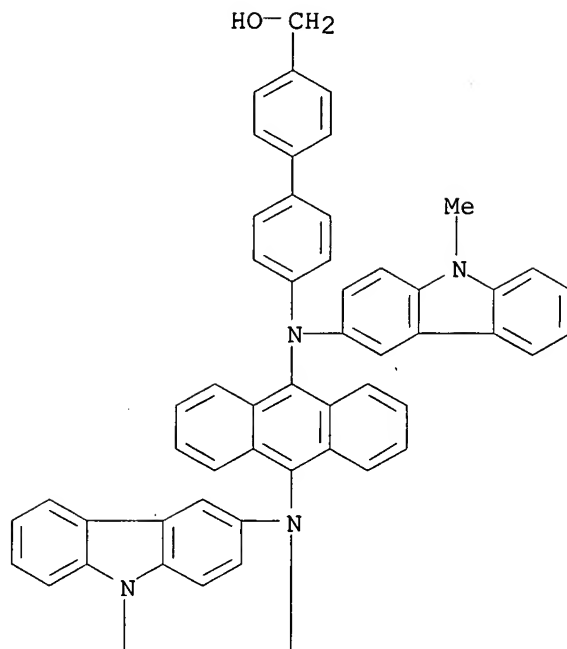
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 672939-38-7 HCAPLUS
 CN [1,1'-Biphenyl]-4-methanol, 4',4'''-[9,10-anthracenediylbis[(9-methyl-9H-carbazol-3-yl)imino]]bis-, homopolymer (9CI) (CA INDEX NAME)

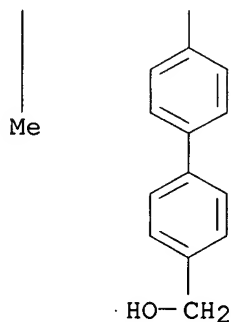
CM 1

CRN 672939-37-6
 CMF C66 H50 N4 O2

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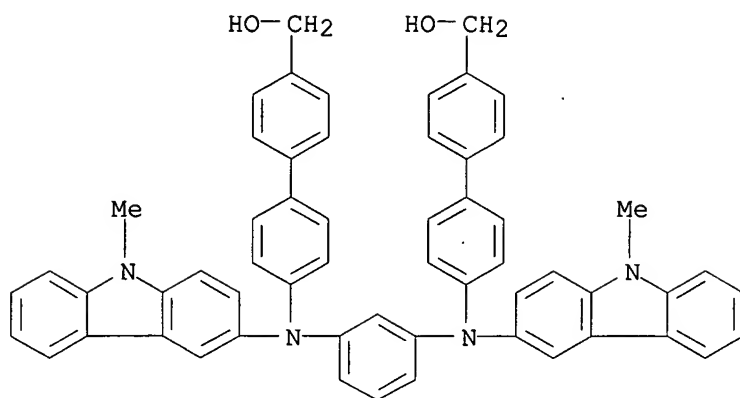
PAGE 2-A



RN 672939-41-2 HCAPLUS
 CN [1,1'-Biphenyl]-4-methanol, 4',4'''-[1,3-phenylenebis[(9-methyl-9H-carbazol-3-yl)imino]]bis-, polymer with 4',4'''-[9,10-anthracenediylbis[(9-methyl-9H-carbazol-3-yl)imino]]bis[benzenemethanol] and 4',4'''-[1,4-phenylenebis[(9-methyl-9H-carbazol-3-yl)imino]]bis[benzenemethanol] (9CI) (CA INDEX NAME)

CM 1

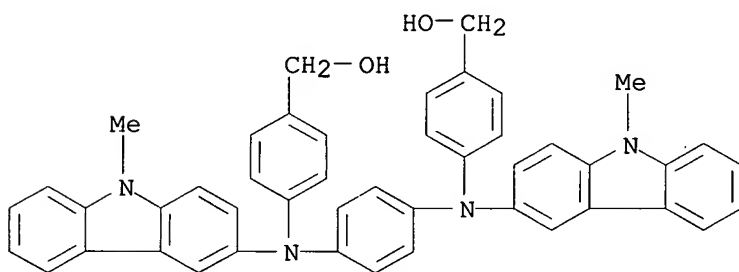
CRN 672939-40-1
 CMF C58 H46 N4 O2



CM 2

CRN 672939-39-8

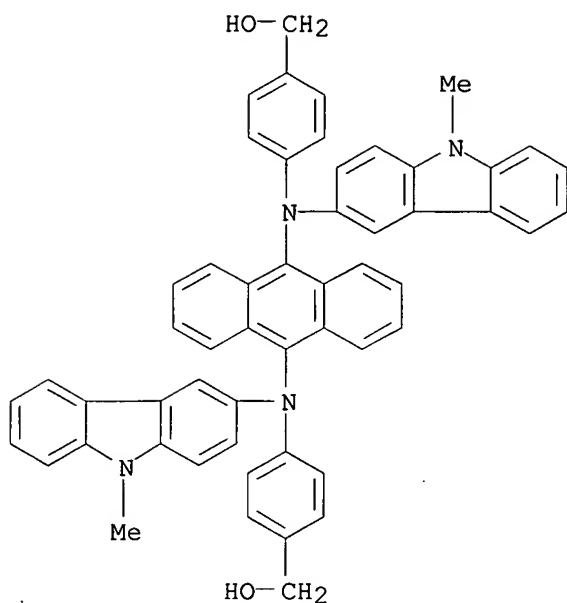
CMF C46 H38 N4 O2



CM 3

CRN 672939-31-0

CMF C54 H42 N4 O2



L85 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Organic electroluminescent device

IT 672937-85-8 672937-89-2

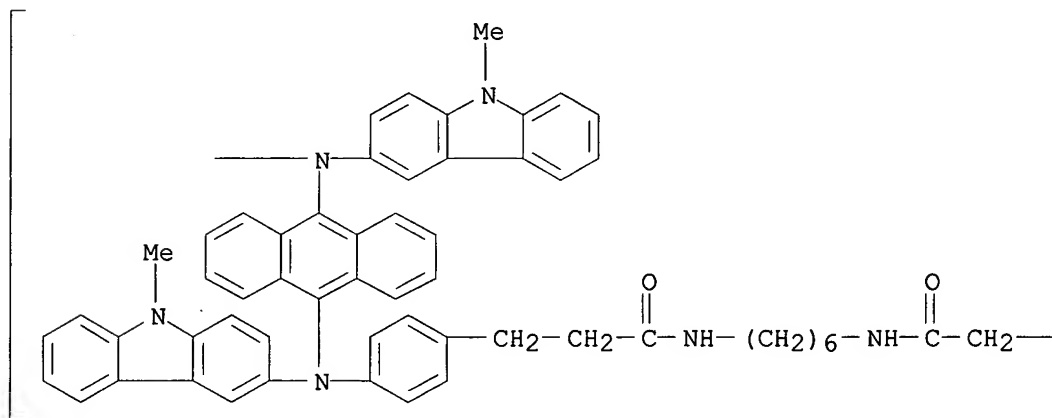
RL: DEV (Device component use); USES (Uses)

(organic electroluminescent device comprising charge transporting polyurethane)

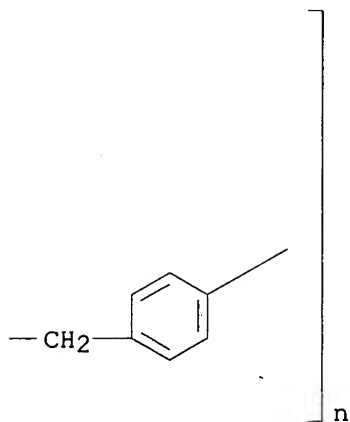
RN 672937-85-8 HCAPLUS

CN Poly[[[9-methyl-9H-carbazol-3-yl)imino]-9,10-anthracenediyl[(9-methyl-9H-carbazol-3-yl)imino]-1,4-phenylene(3-oxo-1,3-propanediyl)imino-1,6-hexanediyylimino(1-oxo-1,3-propanediyl)-1,4-phenylene] (9CI) (CA INDEX NAME)

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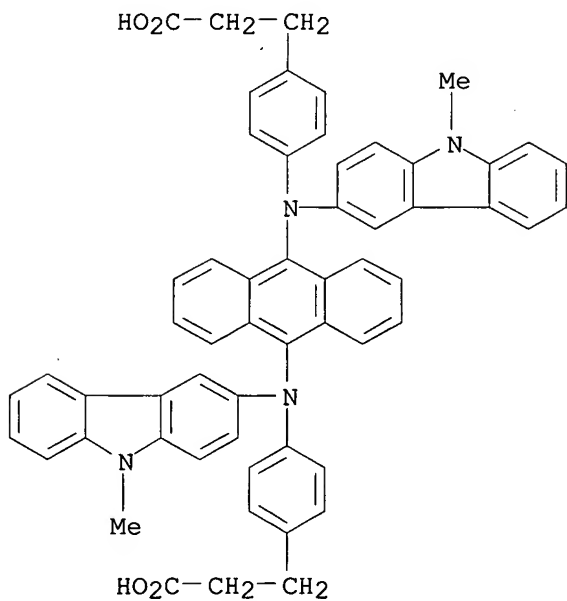
PAGE 1-B



RN 672937-89-2 HCAPLUS
 CN Benzenepropanoic acid, 4,4'-[9,10-anthracenediylbis[(9-methyl-9H-carbazol-3-yl)imino]]bis-, polymer with 1,6-diisocyanatohexane (9CI) (CA INDEX NAME)

CM 1

CRN 672937-88-1
 CMF C58 H46 N4 O4



CM 2

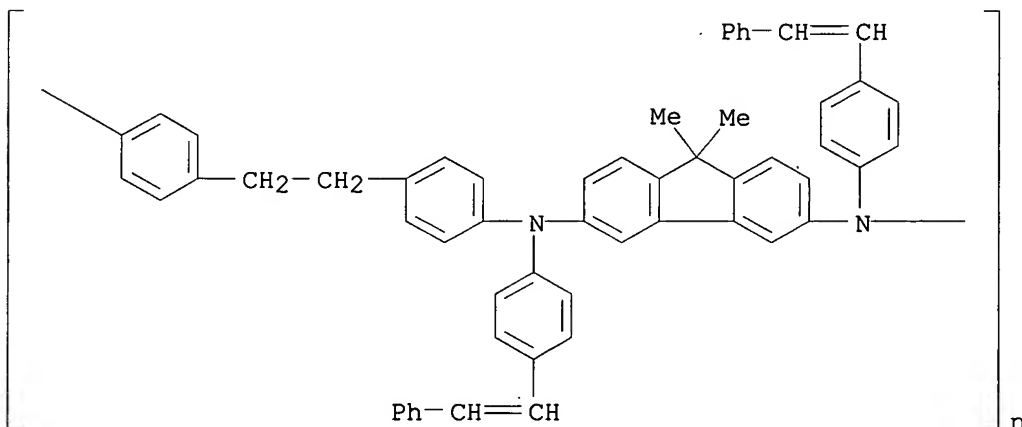
CRN 822-06-0
 CMF C8 H12 N2 O2

OCN- (CH₂)₆-NCO

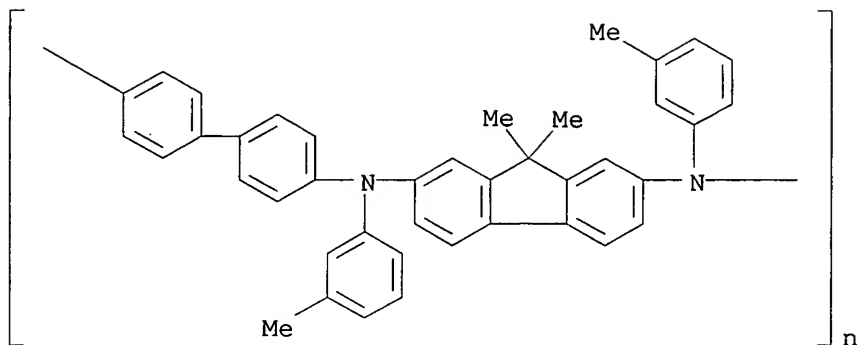
L85 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Organic electroluminescent device
 IT **651048-29-2 651048-30-5**
 RL: DEV (Device component use); USES (Uses)
 (charge transporting material for organic electroluminescent device)
 RN 651048-29-2 HCAPLUS
 CN Poly[[[4-(2-phenylethenyl)phenyl]imino]-1,4-naphthalenediyl[[4-(2-phenylethenyl)phenyl]imino]-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
 RN 651048-30-5 HCAPLUS
 CN Poly[[[4-(2-phenylethenyl)phenyl]imino](9,9-dimethyl-9H-fluorene-3,6-diyl)[[4-(2-phenylethenyl)phenyl]imino]-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

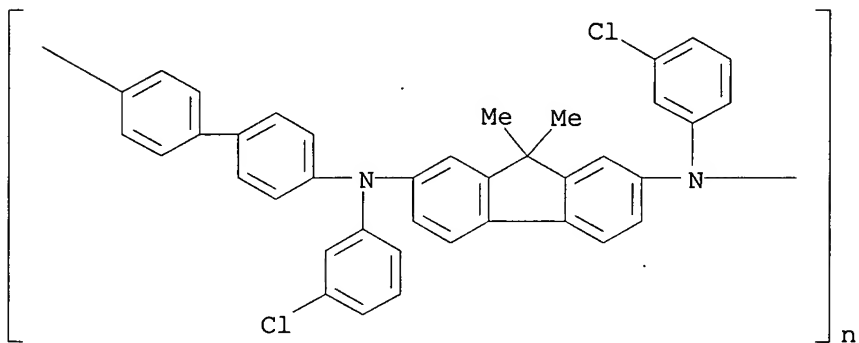


L85 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoreceptor containing charge-transporting polymer and low molecular weight substance in photosensitive layer, process cartridge, and electrophotographic apparatus
 IT **622852-14-6 622852-15-7**
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (electrophotog. photoreceptor containing charge-transporting polymer and low. mol. weight compound in photosensitive layer)
 RN 622852-14-6 HCAPLUS
 CN Poly[[[(3-methylphenyl)imino](9,9-dimethyl-9H-fluorene-2,7-diyl)[(3-methylphenyl)imino][1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



RN 622852-15-7 HCAPLUS

CN Poly[[(3-chlorophenyl)imino] (9,9-dimethyl-9H-fluorene-2,7-diyl) [(3-chlorophenyl)imino] [1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)



L85 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Organic electroluminescent device comprising electron transporting polyether

IT 597550-98-6 597550-99-7 597551-00-3
597551-01-4 597551-02-5 597551-03-6

RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device comprising electron transporting polyether)

RN 597550-98-6 HCAPLUS

CN Poly[(phenylimino)-9,10-anthracenediyl(phenylimino)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 597550-99-7 HCAPLUS

CN Poly[[(3,4-dimethylphenyl)imino]-1,4-naphthalenediyl[(3,4-dimethylphenyl)imino]-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI)

(CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 597551-00-3 HCAPLUS

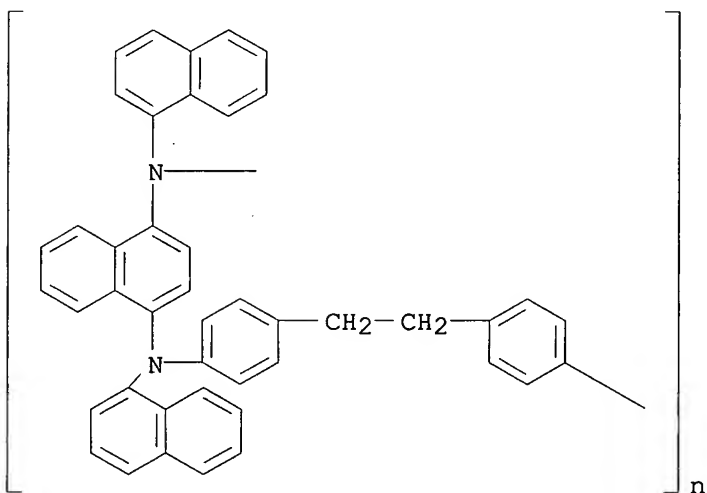
CN Poly[([1,1'-biphenyl]-4-ylimino)-1,4-naphthalenediyl([1,1'-biphenyl]-4-ylimino)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 597551-01-4 HCAPLUS

CN Poly[(1-naphthalenylimino)-1,4-naphthalenediyl(1-naphthalenylimino)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 597551-02-5 HCAPLUS

CN Poly[(1-naphthalenylimino)-9,10-anthracenediyl(1-naphthalenylimino)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

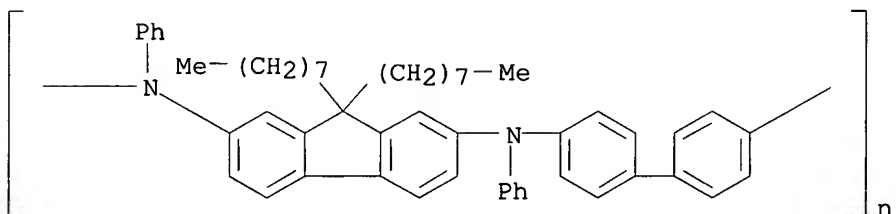
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
 RN 597551-03-6 HCAPLUS
 CN Poly[(phenylimino)-5,12-naphthacenediyl(phenylimino)-1,4-phenylene-1,2-ethanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

L85 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI End-group analysis of blue light-emitting polymers using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry
 IT **484032-91-9**
 RL: PRP (Properties)
 (end-group anal. of blue light-emitting polymers using matrix-assisted laser desorption/ionization time-of-flight mass spectrometry)
 RN 484032-91-9 HCAPLUS
 CN Poly[(phenylimino) (9,9-dioctyl-9H-fluorene-2,7-diyl) (phenylimino) [1,1'-biphenyl]-4,4'-diyl] (9CI) (CA INDEX NAME)

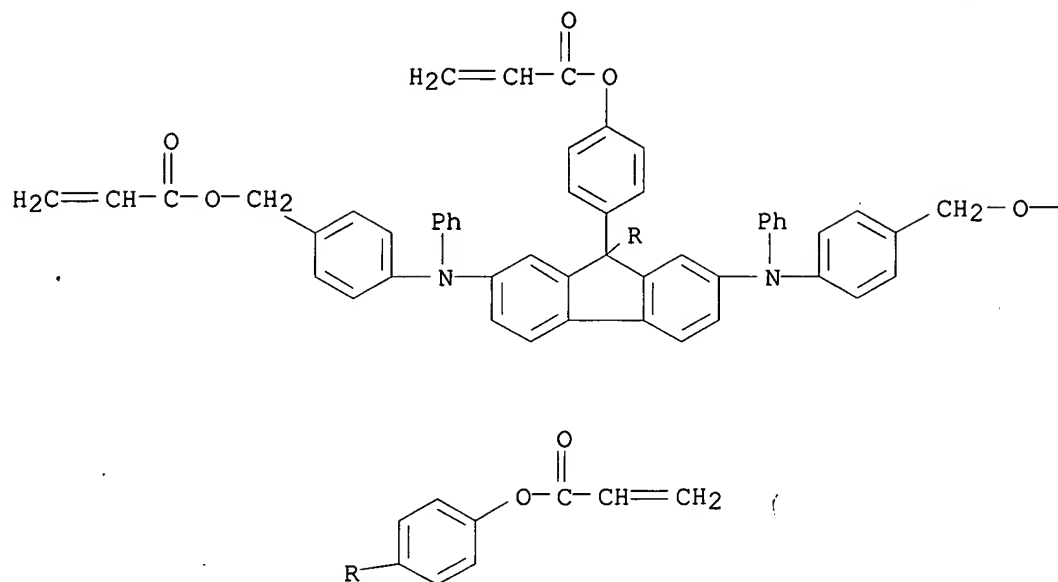


L85 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoreceptor containing halide and positive hole-transporting compound polymer
 IT **344449-50-9**
 RL: TEM (Technical or engineered material use); USES (Uses)
 (pos. hole-transporting compound polymer in electrophotog. photoreceptor)
 RN 344449-50-9 HCAPLUS
 CN 2-Propenoic acid, [2,7-bis[[4-[[[(1-oxo-2-propenyl)oxy]methyl]phenyl]phenyl amino]-9H-fluoren-9-ylidene]di-4,1-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

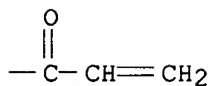
CM 1

CRN 344449-49-6
 CMF C63 H48 N2 O8

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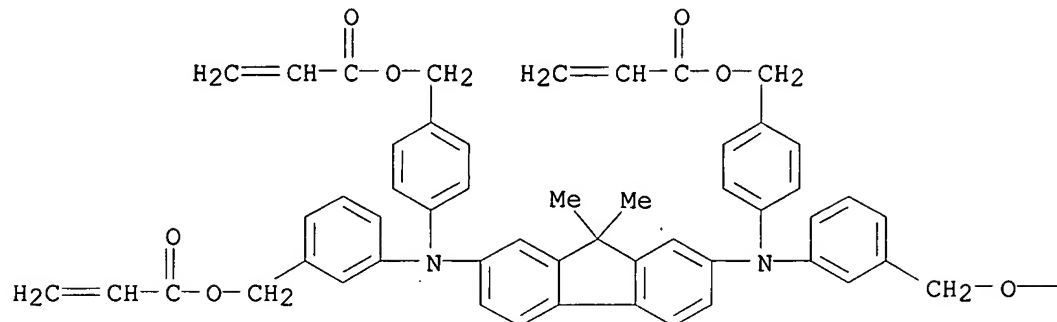


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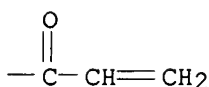


L85 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoconductor, process cartridge, and
 electrophotographic apparatus
 IT **269411-28-1**
 RL: DEV (Device component use); PEP (Physical, engineering or chemical
 process); PROC (Process); USES (Uses)
 (polymerized pos. hole transport substance in electrophotog.
 photoconductor)
 RN 269411-28-1 HCAPLUS
 CN 2-Propenoic acid, (9,9-dimethyl-9H-fluorene-2,7-diyl)bis[[[3-[[[(1-oxo-2-
 propenyl)oxy]methyl]phenyl]imino]-4,1-phenylenemethylene] ester,
 homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 269411-27-0
 CMF C55 H48 N2 O8

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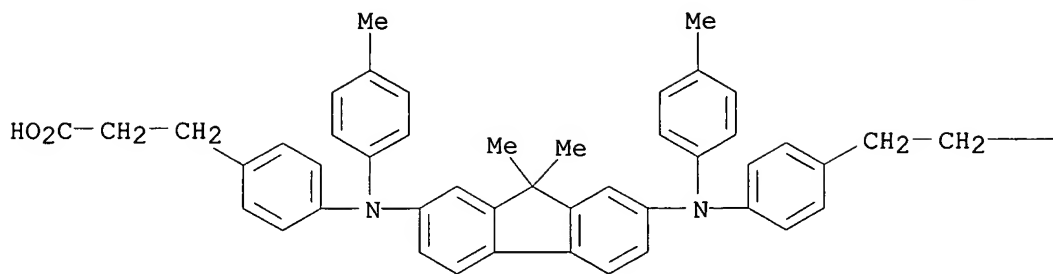


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L85 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic photoreceptor using random copolymerized
 charge-transporting polyester
 IT **189150-73-0**
 RL: DEV (Device component use); USES (Uses)
 (charge-transporting polyester for electrophotog. photoreceptor)
 RN 189150-73-0 HCAPLUS
 CN Decanedioic acid, polymer with 4,4'-[(9,9-dimethyl-9H-fluorene-2,7-
 diyl)bis[(4-methylphenyl)imino]]bis[benzenepropanoic acid] and
 1,2-ethanediol (9CI) (CA INDEX NAME)
 CM 1
 CRN 189150-72-9
 CMF C47 H44 N2 O4

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—CO₂H

CM 2

CRN 111-20-6
CMF C10 H18 O4

HO₂C—(CH₂)₈—CO₂H

CM 3

CRN 107-21-1
CMF C2 H6 O2

HO—CH₂—CH₂—OH

L85 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Charge-transporting polymer, process for producing the same, and organic electronic device containing the same

IT **178611-78-4 178611-84-2**

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(charge-transporting agent for electrophotog. photoreceptor)

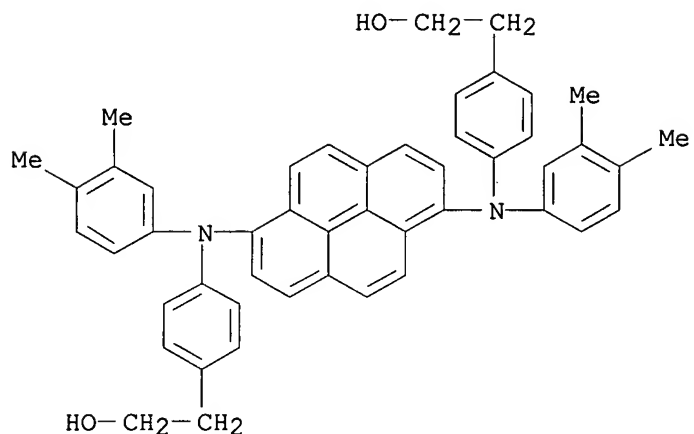
RN 178611-78-4 HCAPLUS

CN Benzeneethanol, 4,4'-[1,6-pyrenediylbis[(3,4-dimethylphenyl)imino]]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 178611-77-3

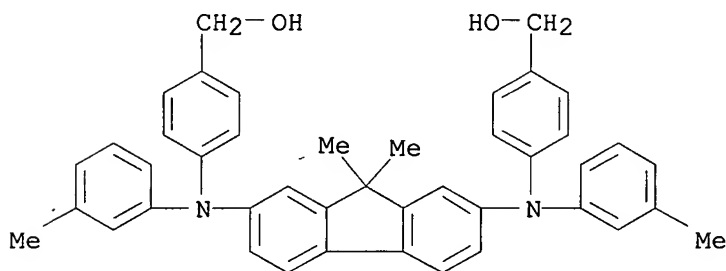
CMF C48 H44 N2 O2



RN 178611-84-2 HCAPLUS
 CN Benzenemethanol, 4,4'-[(9,9-dimethyl-9H-fluorene-2,7-diyl)bis[(3-methylphenyl)imino]]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

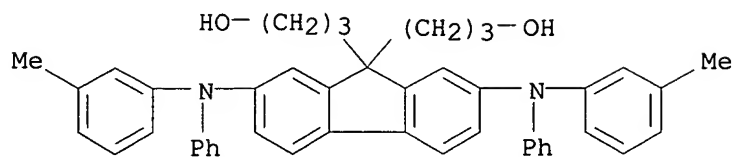
CRN 178611-83-1
 CMF C43 H40 N2 O2



L85 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Electrophotographic imaging method
 IT 170368-55-5 170368-57-7 170368-59-9
 RL: DEV (Device component use); USES (Uses)
 (polymeric charge-transporting material for electrophotog.
 photoreceptor)
 RN 170368-55-5 HCAPLUS
 CN Carbonic dichloride, polymer with 1,3-benzenediamine and
 2,7-bis[(3-methylphenyl)phenylamino]-9H-fluorene-9,9-dipropanol (9CI) (CA
 INDEX NAME)

CM 1

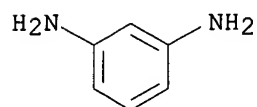
CRN 137269-26-2
 CMF C45 H44 N2 O2



CM 2

CRN 108-45-2

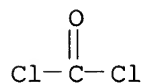
CMF C6 H8 N2



CM 3

CRN 75-44-5

CMF C C12 O



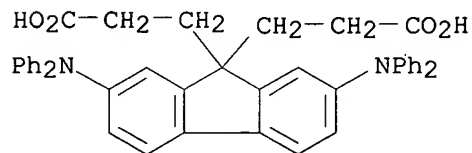
RN 170368-57-7 HCAPLUS

CN 9H-Fluorene-9,9-dipropanoic acid, 2,7-bis(diphenylamino)-, polymer with 2,2'-[1,3-phenylenebis(oxy)]bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 170368-56-6

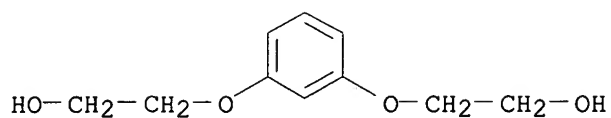
CMF C43 H36 N2 O4



CM 2

CRN 102-40-9

CMF C10 H14 O4



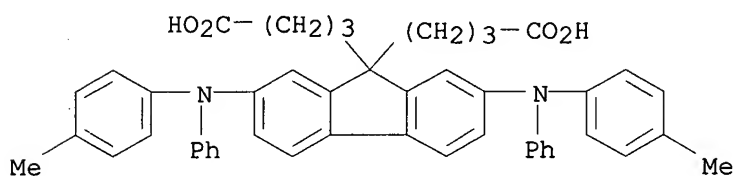
RN 170368-59-9 HCAPLUS

CN 9H-Fluorene-9,9-dibutanoic acid, 2,7-bis[(4-methylphenyl)phenylamino]-, polymer with octanedioic acid (9CI) (CA INDEX NAME)

CM 1

CRN 170368-58-8

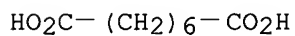
CMF C47 H44 N2 O4



CM 2

CRN 505-48-6

CMF C8 H14 O4



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